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SECCIÓN 1: IDENTIFICACIÓN DE LA SUSTANCIA Y DE LA SOCIEDAD O LA EMPRESA.

1.1 Identificador del producto.

Nombre del producto: TIOCIANATO SODICO

Código del producto: 445A2T

Nombre químico: tiocianato de sodio

N. CAS: 540-72-7 N. CE: 208-754-4

N. registro: 01-2119543700-47-XXXX

1.2 Usos pertinentes identificados de la sustancia y usos desaconsejados.

Genérico industrial

Usos desaconsejados:

Usos distintos a los aconsejados.

1.3 Datos del proveedor de la ficha de datos de seguridad.

Empresa: Barcelonesa de Drogas y Productos Químicos, S.A.

Dirección: Crom, 14 - P.I. FAMADES Población: 08940 - Cornellà del Llobregat

Provincia: Barcelona Teléfono: 93 377 02 08 Fax: 93 377 42 49

E-mail: barcelonesa@barcelonesa.com Web: www.grupbarcelonesa.com

1.4 Teléfono de emergencia: 704100087 (Disponible 24h)

SECCIÓN 2: IDENTIFICACIÓN DE LOS PELIGROS.

2.1 Clasificación de la sustancia.

Según el Reglamento (EU) No 1272/2008:

Acute Tox. 4: Nocivo en contacto con la piel o si se inhala.

Acute Tox. 4 : Nocivo en caso de inhalación.

Acute Tox. 4: Nocivo en caso de ingestión, contacto con la piel o inhalación.

Aquatic Chronic 3: Nocivo para los organismos acuáticos, con efectos nocivos duraderos.

Eye Irrit. 2 : Provoca irritación ocular grave.

2.2 Elementos de la etiqueta.

Etiquetado conforme al Reglamento (EU) No 1272/2008:

Pictogramas:



Palabra de advertencia:

Atención

Frases H:

H302+H312+H332 Nocivo en caso de ingestión, contacto con la piel o inhalación.

H319 Provoca irritación ocular grave.

H412 Nocivo para los organismos acuáticos, con efectos nocivos duraderos.

Frases P:

P261 Evitar respirar el polvo/el humo/el gas/la niebla/los vapores/el aerosol.

P273 Evitar su liberación al medio ambiente.

P280 Llevar guantes/prendas/gafas/máscara de protección.

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P312 Llamar a un CENTRO DE TOXICOLOGÍA/médico/... si la persona se encuentra mal.

P321 Se necesita un tratamiento específico (ver ... en esta etiqueta).

P337+P313 Si persiste la irritación ocular: Consultar a un médico.

P501 Eliminar el contenido/el recipiente en ...

Contiene:

tiocianato de sodio

2.3 Otros peligros.

En condiciones de uso normal y en su forma original, el producto no tiene ningún otro efecto negativo para la salud y el medio ambiente.

SECCIÓN 3: COMPOSICIÓN/INFORMACIÓN SOBRE LOS COMPONENTES.

3.1 Sustancias.

Nombre químico: tiocianato de sodio N. CAS: 540-72-7 N. CE: 208-754-4

N. registro: 01-2119543700-47-XXXX

3.2 Mezclas. No Aplicable.

SECCIÓN 4: PRIMEROS AUXILIOS.

4.1 Descripción de los primeros auxilios.

En los casos de duda, o cuando persistan los síntomas de malestar, solicitar atención médica. No administrar nunca nada por vía oral a personas que se encuentre inconscientes.

Inhalación.

Situar al accidentado al aire libre, mantenerle caliente y en reposo, si la respiración es irregular o se detiene, practicar respiración artificial. No administrar nada por la boca. Si está inconsciente, ponerle en una posición adecuada y buscar ayuda médica. Es recomendable para las personas que dispensan los primeros auxilios el uso de equipos de protección individual (ver sección 8).

Contacto con los ojos.

Retirar las lentes de contacto, si lleva y resulta fácil de hacer. Lavar abundantemente los ojos con agua limpia y fresca durante, por lo menos, 10 minutos, tirando hacia arriba de los párpados y buscar asistencia médica. No permita que la persona se frote el ojo afectado.

Contacto con la piel.

Quitar la ropa contaminada. Lava<mark>r la piel vigo</mark>rosamente con agua y jabón o un limpiador de piel adecuado. NUNCA utilizar disolventes o diluyentes. Es reco<mark>mendable par</mark>a las personas que dispensan los primeros auxilios el uso de equipos de protección individual (ver sección 8).

Ingestión.

Si accidentalmente se ha ingerido, buscar inmediatamente atención médica. Mantenerle en reposo. NUNCA provocar el vómito.

4.2 Principales síntomas y efectos, agudos y retardados.

Producto Irritante, el contacto repetido o prolongado con la piel o las mucosas puede causar enrojecimiento, ampollas o dermatitis, la inhalación de niebla de pulverización o partículas en suspensión puede causar irritación de las vias respiratorias, algunos de los síntomas pueden no ser inmediatos.

Producto Nocivo, una exposición prolongada por inhalación puede causar efectos anestésicos y la necesidad de asistencia médica inmediata.

4.3 Indicación de toda atención médica y de los tratamientos especiales que deban dispensarse inmediatamente.

En los casos de duda, o cuando persistan los síntomas de malestar, solicitar atención médica. No administrar nunca nada por vía oral a personas que se encuentren inconscientes. No inducir el vómito. Si la persona vomita, despeje las vías respiratorias.

SECCIÓN 5: MEDIDAS DE LUCHA CONTRA INCENDIOS.

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El producto no presenta ningún riesgo particular en caso de incendio.

5.1 Medios de extinción.

Medios de extinción apropiados:

Polvo extintor o CO2. En caso de incendios más graves también espuma resistente al alcohol y agua pulverizada.

Medios de extinción no apropiados:

No usar para la extinción chorro directo de agua. En presencia de tensión eléctrica no es aceptable utilizar agua o espuma como medio de extinción.

5.2 Peligros específicos derivados de la sustancia.

Riesgos especiales.

El fuego puede producir un espeso humo negro. Como consecuencia de la descomposición térmica, pueden formarse productos peligrosos: monóxido de carbono, dióxido de carbono. La exposición a los productos de combustión o descomposición puede ser perjudicial para la salud.

5.3 Recomendaciones para el personal de lucha contra incendios.

Refrigerar con agua los tanques, cisternas o recipientes próximos a la fuente de calor o fuego. Tener en cuenta la dirección del viento. Evitar que los productos utilizados en la lucha contra incendio pasen a desagües, alcantarillas o cursos de agua. Los restos de producto y medios de extinción pueden contaminar el medio ambiente acuático.

Equipo de protección contra incendios.

Según la magnitud del incendio, puede ser necesario el uso de trajes de protección contra el calor, equipo respiratorio autónomo, guantes, gafas protectoras o máscaras faciales y botas.

SECCIÓN 6: MEDIDAS EN CASO DE VERTIDO ACCIDENTAL.

6.1 Precauciones personales, equipo de protección y procedimientos de emergencia.

Para control de exposición y medidas de protección individual, ver sección 8.

6.2 Precauciones relativas al medio ambiente.

Producto peligroso para el medio ambiente, en caso de producirse grandes vertidos o si el producto contamina lagos, ríos o alcantarillas, informar a las autoridades competentes, según la legislación local. Evitar la contaminación de desagües, aguas superficiales o subterráneas, así como del suelo.

6.3 Métodos y material de contención y de limpieza.

La zona contaminada debe limpiarse inmediatamente con un descontaminante adecuado. Echar el descontaminante a los restos y dejarlo durante varios días hasta que no se produzca reacción, en un envase sin cerrar.

6.4 Referencia a otras secciones.

Para control de exposición y medidas de protección individual, ver sección 8.

Para la eliminación de los residuos, seguir las recomendaciones de la sección 13.

SECCIÓN 7: MANIPULACIÓN Y ALMACENAMIENTO.

7.1 Precauciones para una manipulación segura.

Para la protección personal, ver sección 8. No emplear nunca presión para vaciar los envases, no son recipientes resistentes a la presión.

En la zona de aplicación debe estar prohibido fumar, comer y beber.

Cumplir con la legislación sobre seguridad e higiene en el trabajo.

Conservar el producto en envases de un material idéntico al original.

7.2 Condiciones de almacenamiento seguro, incluidas posibles incompatibilidades.

Almacenar según la legislación local. Observar las indicaciones de la etiqueta. Almacenar los envases entre 5 y 35 °C, en un lugar seco y bien ventilado, lejos de fuentes de calor y de la luz solar directa. Mantener lejos de puntos de ignición. Mantener lejos de agentes oxidantes y de materiales fuertemente ácidos o alcalinos. No fumar. Evitar la entrada a personas no autorizadas. Una vez abiertos los envases, han de volverse a cerrar cuidadosamente y colocarlos verticalmente para evitar derrames.

El producto no se encuentra afectado por la Directiva 2012/18/UE (SEVESO III).

7.3 Usos específicos finales.

No disponible.

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SECCIÓN 8: CONTROLES DE EXPOSICIÓN/PROTECCIÓN INDIVIDUAL.

8.1 Parámetros de control.

El producto NO contiene sustancias con Valores Límite Ambientales de Exposición Profesional.El producto NO contiene sustancias con Valores Límite Biológicos.

Niveles de concentración DNEL/DMEL:

Nombre	DNEL/DME		Valor
	DNEL	Cutánea, Crónico, Efectos sistémicos	1,7 (mg/kg
	(Trabajadores	3)	bw/day)
ticcionato de codio	DNEL	Inhalación, Crónico, Efectos sistémicos	1,1
tiocianato de sodio N. CAS: 540-72-7	(Consumidore	s)	(mg/m3)
N. CE: 208-754-4	DNEL	Cutánea, Crónico, Efectos sistémicos	1,2
N. CL. 206-734-4	(Consumidore	s)	(mg/kg)
	DNEL	Oral, Crónico, Efectos sistémicos	0,3 (mg/kg
	(Consumidore	s)	bw/day)

DNEL: Derived No Effect Level, (nivel sin efecto obtenido) nivel de exposición a la sustancia por debajo del cual no se prevén efectos adversos.

DMEL: Derived Minimal Effect Level, nivel de exposición que corresponde a un riesgo bajo, que debe considerarse un riesgo mínimo tolerable.

Niveles de concentración PNEC:

Nombre		Detalles	Valor
		aqua - freshwater (Assessment factor 10)	0,095 (mg/L)
tiocianato de sodio		aqua -marine water (Assessment factor 100)	0,0095
N. CAS: 540-72-7			(mg/L)
N. CE: 208-754-4		aqua - intermittent releases (Assessment factor	0,0272
		100)	(mg/L)

PNEC: Predicted No Effect Concentration, (concentración prevista sin efecto) concentración de la sustancia por debajo de la cual no se esperan efectos negativos en el comportamiento medioambiental.

8.2 Controles de la exposición.

Medidas de orden técnico:

Proveer una ventilación adecuada, lo cual puede conseguirse mediante una buena extracción-ventilación local y un buen sistema general de extracción.

Concentración:	100 %
Usos:	Genérico industrial
Protección respir	atoria:
EPI:	Máscara filtrante para la protección contra gases y partículas
Características:	Marcado «CE» Categoría III. La máscara debe tener amplio campo de visión y forma anatómica para ofrecer estanqueidad y hermeticidad.
Normas CEN:	EN 136, EN 140, EN 405
Mantenimiento:	No se debe almacenar en lugares expuestos a temperaturas elevadas y ambientes húmedos antes de su utilización. Se debe controlar especialmente el estado de las válvulas de inhalación y exhalación del adaptador facial.
Observaciones:	Se deberán leer atentamente las instrucciones del fabricante al respecto del uso y mantenimiento del equipo. Se acoplarán al equipo los filtros necesarios en función de las características específicas del riesgo (Partículas y aerosoles: P1-P2-P3, Gases y vapores: A-B-E-K-AX) cambiándose según aconseje el fabricante.
Tipo de filtro necesario:	A2
Protección de las	manos:
EPI:	Guantes de protección contra productos químicos
Características:	Marcado «CE» Categoría III.
Normas CEN:	EN 374-1, En 374-2, EN 374-3, EN 420

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Se guardarán en un lugar seco, alejados de posibles fuentes de calor, y se evitará la exposición a los Mantenimiento: rayos solares en la medida de lo posible. No se realizarán sobre los guantes modificaciones que puedan

alterar su resistencia ni se aplicarán pinturas, disolventes o adhesivos.

Observaciones:

Los guantes deben ser de la talla correcta, y ajustarse a la mano sin quedar demasiado holgados ni

demasiado apretados. Se deberán utilizar siempre con las manos limpias y secas.

Material: PVC (Cloruro de polivinilo) Tiempo de penetración (min.): > 480 Espesor del material (mm): 0,35

Protección de los ojos:

EPI: Gafas de protección con montura integral

Características: Marcado «CE» Categoría II. Protector de ojos de montura integral para la

protección contra salpicaduras de líquidos, polvo, humos, nieblas y vapores.

Normas CEN: EN 165, EN 166, EN 167, EN 168

Mantenimiento:

La visibilidad a través de los oculares debe ser óptima para lo cual estos elementos se deben limpiar a

diario, los protectores deben desinfectarse periódicamente siguiendo las instrucciones del fabricante.

Observaciones: Indicadores de deterioro pueden ser: coloración amarilla de los oculares, arañazos superficiales en los

oculares, rasgaduras, etc.

Protección de la piel:

EPI: Ropa de protección con propiedades antiestáticas

Marcado «CE» Categoría II. La ropa de protección no debe ser estrecha o estar

Características: Suelta para que no interfiera en los movimientos del usuario.

Normas CEN: EN 340, EN 1149-1, EN 1149-2, EN 1149-3, EN 1149-5

Mantenimiento: Se deben seguir las instrucciones de lavado y conservación proporcionadas por el fabricante para

garantizar una protección invariable.

La ropa de protección debería proporcionar un nivel de confort consistente con el nivel de protección que

Observaciones: debe proporcionar contra el riesgo contra el que protege, con las condiciones ambientales, el nivel de

actividad del usuario y el tiempo de uso previsto.

EPI: Calzado de protección con propiedades antiestáticas

Características: Marcado «CE» Categoría II.

Normas CEN: EN ISO 13287, EN ISO 20344, EN ISO 20346

Mantenimiento: El calzado debe ser objeto de un control regular, si su estado es deficiente se deberá dejar de utilizar y

ser reemplazado.

Observaciones: La comodidad en el uso y la aceptabilidad son factores que se valoran de modo muy distinto según los individuos. Por tanto conviene probar distintos modelos de calzado y, a ser posible, anchos distintos.

SECCIÓN 9: PROPIEDADES FÍSICAS Y QUÍMICAS.

9.1 Información sobre propiedades físicas y químicas básicas.

Aspecto:Sólido blanco Color: N.D./N.A. Olor:Inodoro

Umbral olfativo: N.D./N.A.

pH:N.D./N.A.

Punto de Fusión:287 ºC

Punto/intervalo de ebullición: N.D./N.A. Punto de inflamación: > 60 °C Tasa de evaporación: N.D./N.A. Inflamabilidad (sólido, gas): No Límite inferior de explosión: N.D./N.A.

Límite superior de explosión: N.D./N.A.

Presión de vapor: N.D./N.A. Densidad de vapor:N.D./N.A. Densidad relativa:1.735 g/cm³

Solubilidad: N.D./N.A. Liposolubilidad: N.D./N.A.

Hidrosolubilidad: 139g/100cc (21 °C)

Coeficiente de reparto (n-octanol/agua): N.D./N.A. Temperatura de autoinflamación: N.D./N.A. Temperatura de descomposición: N.D./N.A.

Viscosidad: N.D./N.A.

Propiedades explosivas: N.D./N.A. Propiedades comburentes: N.D./N.A.

N.D./N.A.= No Disponible/No Aplicable debido a la naturaleza del producto.

-Continúa en la página siguiente.-

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9.2 Otros datos.

Punto de Gota: N.D./N.A. Centelleo: N.D./N.A.

Viscosidad cinemática: N.D./N.A.

N.D./N.A.= No Disponible/No Aplicable debido a la naturaleza del producto.

SECCIÓN 10: ESTABILIDAD Y REACTIVIDAD.

10.1 Reactividad.

El producto no presenta peligros debido a su reactividad.

10.2 Estabilidad química.

Estable bajo las condiciones de manipulación y almacenamiento recomendadas (ver epígrafe 7).

10.3 Posibilidad de reacciones peligrosas.

El producto no presenta posibilidad de reacciones peligrosas.

10.4 Condiciones que deben evitarse.

Evitar cualquier tipo de manipulación incorrecta.

10.5 Materiales incompatibles.

Mantener alejado de agentes oxidantes y de materiales fuertemente alcalinos o ácidos, a fin de evitar reacciones exotérmicas.

10.6 Productos de descomposición peligrosos.

No se descompone si se destina a los usos previstos.

SECCIÓN 11: INFORMACIÓN TOXICOLÓGICA.

PREPARADO IRRITANTE. Salpicaduras en los ojos pueden causar irritación de los mismos.

11.1 Información sobre los efectos toxicológicos.

El contacto repetido o prolongado con el producto, puede causar la eliminación de la grasa de la piel, dando lugar a una dermatitis de contacto no alérgica y a que se absorba el producto a través de la piel.

Las salpicaduras en los ojos pueden causar irritación y daños reversibles.

Información Toxicológica.

Nombre		Toxicidad aguda				
		Tipo	Ensayo	Especie	Valor	
			Oral	LD50	Rata	541 mg/kg bw
tiocianato de sodio			Cutánea	LD50	Rata	> 2000 mg/kg bw (male/female)
N. CAS: 540-72-7	N. CE: 208-754-4	4	Inhalación			

a) toxicidad aguda;

Producto clasificado:

Toxicidad cutánea aguda, Categoría 4: Nocivo en contacto con la piel.

Toxicidad aguda por inhalación, Categoría 4: Nocivo en caso de inhalación.

Toxicidad oral aguda, Categoría 4: Nocivo en caso de ingestión.

b) corrosión o irritación cutáneas;

Datos no concluyentes para la clasificación.

c) lesiones oculares graves o irritación ocular;

Producto clasificado:

Irritación ocular, Categoría 2: Provoca irritación ocular grave.

d) sensibilización respiratoria o cutánea;

Datos no concluyentes para la clasificación.

e) mutagenicidad en células germinales;

Datos no concluyentes para la clasificación.

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f) carcinogenicidad;

Datos no concluyentes para la clasificación.

g) toxicidad para la reproducción;

Datos no concluyentes para la clasificación.

- h) toxicidad específica en determinados órganos (STOT) exposición única; Datos no concluyentes para la clasificación.
- i) toxicidad específica en determinados órganos (STOT) exposición repetida;
 Datos no concluyentes para la clasificación.
- j) peligro por aspiración;

Datos no concluyentes para la clasificación.

SECCIÓN 12: INFORMACIÓN ECOLÓGICA.

12.1 Toxicidad.

A	lombre	•			Ecotoxicidad	
N	ombre	3	Tipo	Ensayo	Especie	Valor
		7	Peces	CL50	Pez	65 mg/l (96h)
tiocianato de sodio			Invertebrados acuáticos	CE50	Dafnia magna	3.56 mg/l (48h)
N. CAS: 540-72-7	N. C	CE: 208-754-4	Plantas acuáticas	EC50	Algas	234.3 mg/L (72h)

12.2 Persistencia y degradabilidad.

No se dispone de información relativa a la biodegradabilidad.

No se dispone de información relativa a la degradabilidad.

No existe información disponible sobre la persistencia y degradabilidad del producto.

12.3 Potencial de Bioacumulación.

No se dispone de información relativa a la Bioacumulación.

12.4 Movilidad en el suelo.

No existe información disponible sobre la movilidad en el suelo.

No se debe permitir que el producto pase a las alcantarillas o a cursos de agua.

Evitar la penetración en el terreno.

12.5 Resultados de la valoración PBT y mPmB.

No existe información disponible sobre la valoración PBT y mPmB del producto.

12.6 Otros efectos adversos.

No existe información disponible sobre otros efectos adversos para el medio ambiente.

SECCIÓN 13: CONSIDERACIONES RELATIVAS A LA ELIMINACIÓN.

13.1 Métodos para el tratamiento de residuos.

No se permite su vertido en alcantarillas o cursos de agua. Los residuos y envases vacíos deben manipularse y eliminarse de acuerdo con las legislaciones local/nacional vigentes.

Seguir las disposiciones de la Directiva 2008/98/CE respecto a la gestión de residuos.

SECCIÓN 14: INFORMACIÓN RELATIVA AL TRANSPORTE.

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No es peligroso en el transporte. En caso de accidente y vertido del producto actuar según el punto 6.

14.1 Número ONU.

No es peligroso en el transporte.

14.2 Designación oficial de transporte de las Naciones Unidas.

Descripción:

ADR: No es peligroso en el transporte.

IMDG: No es peligroso en el transporte.

ICAO/IATA: No es peligroso en el transporte.

14.3 Clase(s) de peligro para el transporte.

No es peligroso en el transporte.

14.4 Grupo de embalaje.

No es peligroso en el transporte.

14.5 Peligros para el medio ambiente.

No es peligroso en el transporte.

14.6 Precauciones particulares para los usuarios.

No es peligroso en el transporte.

14.7 Transporte a granel con arreglo al anexo II del Convenio MARPOL y del Código IBC.

No es peligroso en el transporte.

SECCIÓN 15: INFORMACIÓN REGLAMENTARIA.

15.1 Reglamentación y legislación en materia de seguridad, salud y medio ambiente específicas para la sustancia.

El producto no está afectado por el Reglamento (CE) nº 1005/2009 del Parlamento Europeo y del Consejo, de 16 de septiembre de 2009, sobre las sustancias que agotan la capa de ozono.

Compuesto orgánico volátil (COV)
Contenido de COV (p/p): 0 %
Contenido de COV: 0 g/l

El producto no se encuentra afectado por la Directiva 2012/18/UE (SEVESO III).

El producto no está afectado por el Reglamento (UE) No 528/2012 relativo a la comercialización y el uso de los biocidas.

El producto no se encuentra afectado por el procedimiento establecido en el Reglamento (UE) No 649/2012, relativo a la exportación e importación de productos químicos peligrosos.

15.2 Evaluación de la seguridad química.

No se ha llevado a cabo una evaluación de la seguridad química del producto.

Se dispone de Escenario de Exposición del producto.

SECCIÓN 16: OTRA INFORMACIÓN.

Códigos de clasificación:

Acute Tox. 4: Toxicidad cutánea aguda, Categoría 4

Acute Tox. 4 : Toxicidad aguda por inhalación, Categoría 4

Acute Tox. 4: Toxicidad oral aguda, Categoría 4

Aquatic Chronic 3: Efectos crónicos para el medio ambiente acuático, Categoría 3

Eye Irrit. 2 : Irritación ocular, Categoría 2

Secciones modificadas respecto a la versión anterior:

1,2,9,14,16

Se aconseja realizar formación básica con respecto a seguridad e higiene laboral para realizar una correcta manipulación del producto.

(de acuerdo con el Reglamento (UE) 2015/830)

445A2T-TIOCIANATO SODICO



Versión: 13
Fecha de revisión: 05/12/2017 Fecha de

Página 9 de 9 Fecha de impresión: 05/12/2017

Se dispone de Escenario de Exposición del producto.

Abreviaturas y acrónimos utilizados:

CEN: Comité Europeo de Normalización.

DMEL: Derived Minimal Effect Level, nivel de exposición que corresponde a un riesgo bajo, que debe

considerarse un riesgo mínimo tolerable.

DNEL: Derived No Effect Level, (nivel sin efecto obtenido) nivel de exposición a la sustancia por debajo

del cual no se prevén efectos adversos.

EC50: Concentración efectiva media. EPI: Equipo de protección personal. LC50: Concentración Letal, 50%.

LD50: Dosis Letal, 50%.

PNEC: Predicted No Effect Concentration, (concentración prevista sin efecto) concentración de la

sustancia por debajo de la cual no se esperan efectos negativos en el comportamiento medioambiental.

Principales referencias bibliográficas y fuentes de datos:

http://eur-lex.europa.eu/homepage.html

http://echa.europa.eu/

Reglamento (UE) 2015/830. Reglamento (CE) No 1907/2006. Reglamento (EU) No 1272/2008.

La información facilitada en esta ficha de Datos de Seguridad ha sido redactada de acuerdo con el REGLAMENTO (UE) 2015/830 DE LA COMISIÓN de 28 de mayo de 2015 por el que se modifica el Reglamento (CE) no 1907/2006 del Parlamento Europeo y del Consejo, relativo al registro, la evaluación, la autorización y la restricción de las sustancias y mezclas químicas (REACH), por el que se crea la Agencia Europea de Sustancias y Preparados Químicos, se modifica la Directiva 1999/45/CE y se derogan el Reglamento (CEE) nº 793/93 del Consejo y el Reglamento (CE) nº 1488/94 de la Comisión así como la Directiva 76/769/CEE del Consejo y las Directivas 91/155/CEE, 93/67/CEE, 93/105/CEE y 2000/21/CE de la Comisión.

La información de esta Ficha de Datos de Seguridad del Producto está basada en los conocimientos actuales y en las leyes vigentes de la CE y nacionales, en cuanto que las condiciones de trabajo de los usuarios están fuera de nuestro conocimiento y control. El producto no debe utilizarse para fines distintos a aquellos que se especifican, sin tener primero una instrucción por escrito, de su manejo. Es siempre responsabilidad del usuario tomar las medidas oportunas con el fin de cumplir con las exigencias establecidas en las legislaciones.



Annex to extended safety data sheet (eSDS)

ES1: Manufacture of Sodium thiocyanate (100% solid and 50% aqueous solution)

1 Description of the ES 1

•	% solid and 50% aqueous solution CAS: 540-72-7
Section 1	Exposure Scenario Title
Title	Manufacture of NaSCN (, low dustiness)
Use Descriptor	Sector of Use: Industrial (SU3, SU8)
	Process Categories: PROC2, PROC8b, PROC15;
	Environmental Release Categories: ERC 1
Processes, tasks, activities covered	Manufacture of NaSCN. Includes recycling/recovery, material transfers, storage, maintenance and (un)loading (including road car and bulk container), sampling and associated laboratory activities.
GES exposure criteria	Worker DNEL (inhalation): 3.00 mg/m³ DNEL (skin): 1.68 mg/kg bw/day Not classified as 1 or 2 Carcinogenic Mutagenic and/or Reproduction toxic
	Environmental PNECs (SCN- equivalent)
	PNEC aqua (freshwater): 0.095 mg/L
	PNEC aqua (marine water): 0.0095 mg/L
	PNEC aqua (intermittent release): 0.0272 mg/L
	PNEC sediment (freshwater): 0.543 mg/kg sediment dw
	PNEC sediment (marine water): 0.0543 mg/kg sediment dw
	PNEC soil: 6.336 mg/kg soil dw
	PNEC stp: 30 mg/L
	PNEC oral: 1.667 mg/kg food
	Not classified as Persistent Bio Accumulation and toxic, nor very Persistent and very Bio accumulating
Section 2	Operational conditions and risk management measures
Section 2.1	Control of worker exposure
Product characteristics	
Physical form of product	Solid, low dustiness [OC1];
	Solid, vapor pressure: << 0.01 Pa
	Aqueous solution, vapor pressure of substance << 0.01 Pa (disassociation is complete)
	Exposure only by aerosols
Concentration of substance in product	Covers percentage substance in the product up to 100 % (unless stated differently) [G13]
Amounts used	Varies between milliliters (sampling) and cubic meters (material transfers) [OC13].;
Frequency and duration of use	Covers daily exposures up to 8 hours (unless stated differently) [G2]
Human factors not influenced by risk management	Not applicable
Other Operational Conditions affecting worker exposure	Assumes a good basic standard of occupational hygiene is implemented [G1]. Ensure operatives are trained to minimize exposures [EI119].
	Assumes use at not > 20°C above ambient [G15];

Product name: sodium thiocyanate Version #: 2.0 Revision date: 27-09-2013. eSDS EU 13 / 133



	Indoor [OC8] and Outdoor [OC9]
Contributing Scenarios	Risk Management Measures
Due to eye irritating properties of the substance	e: Use suitable eye protection [PPE26].
Avoid skin contact.	
PROC 2	
Automated process with (semi) closed	No specific measures identified [EI18].
systems [CS93]; Continuous process [CS54];	
Process sampling [CS2] (open systems)	
[CS108].	Recommendation:
	Ensure the system is closed.
General exposures (closed systems) [CS15];	Clear transfer lines prior to de-coupling [E39]. Clear spills immediately [C&H13].
Material transfers [CS3]; Drying and storage	
[CS12]; Bulk product storage [CS85];	
Centrifuging including charging [CS127].	
PROC 8b	
Product packaging [CS124]. Dedicated facility	Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee
[CS81]; General exposures (open systems)	training [PPE16].
[CS16]. Material transfers [CS3]. With	
sample collection [CS56].	Recommendation:
	Drain down and flush system prior to equipment break-in or maintenance [E55]. Use bulk
	or semi-bulk handling systems [E43]; Use drum pumps [E53]. Clean equipment and the
DD00.45	work area every day [C&H3]. Clear spills immediately [C&H13].
PROC 15	No specific measures identified [EI18].
Laboratory activities [CS36]. Small scale [CS61]. Manual [CS34].	
Section 2.2	Control of environmental exposure
Product characteristics	Non-hydrophobic [PrC4b]. Readily biodegradable [PrC5a].
Amounts used	Fraction of EU tonnage used in region: 1 [A1].
	Regional use tonnage (tonnes/year): 15260 as SCN ⁻ [A2]. Fraction of Regional tonnage
	used locally: 1 [A3].
	Annual site tonnage (tonnes/year): 15260as SCN ⁻ [A5]
Frequency and duration of use	Continuous release. [FD2] Emission Days (days/year): 365 [FD4].
Other Operational Conditions of use affecting	Product applied in aqueous process solution with negligible volatilization [OOC23].
environmental exposure	
	Waste water is collected in a tank. The quality of the water in the tank is checked regularly.
	Generally one tank per day is discharged to the STP which equals 10,000 m ³ /year with a
	concentration of 500 mg/l SCN.
	Local freshwater dilution factor: 4.3E+4 [EF1] (based on standard STP).
	Sewage sludge should not be applied onto soil.
	Filter material used for cleaning of the product should be collected and incinerated.
	Cooling water used in process: 32250 m³/year; 1 mg/l SCN⁻. Discharge of cooling water is directly to surface water (river Rhine). Local freshwater dilution factor: 1.426E+3 [EF1]. Flow rate of the river: 1,000 m³/s (worst case) (source: www.hgk.de).
	Concentration in surface water during emission episode: 7.0E-4 mg/l SCN ⁻ .

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	Drogas y Productos Químicos
Technical onsite conditions and measures to	All waste water should go to a STP.
reduce or limit discharges, air emissions and	
releases to soil	Risk from environmental exposure is driven by freshwater. [TCR1a].
Organization measures to prevent/limit	Ensure control measures are regularly inspected and maintained [E6]
release from site	Site should have a spill plan to ensure that adequate safeguards are in place to minimize
	the impact of episodic releases [W2].
Conditions and measures related to municipal	
sewage treatment plant	Sewage sludge should not be applied onto soil.
Conditions and measures related to external	Filter material used for cleaning of the product should be collected and incinerated.
treatment of waste for disposal	The material document of the product chodic so consoled and memorated.
a camenta i madia isi disposa	External treatment and disposal of waste should comply with applicable local and/or
	national regulations.[ETW3]
Conditions and measures related to external	Not applicable
recovery of waste	Two applicable
Other environmental control measures	Not applicable
additional to above	Not applicable
Section 3	Exposure Estimation
3.1. Health.	
· · · · · · · · · · · · · · · · · · ·	ed the applicable exposure limits (given in section 8 of the SDS) when the operational
conditions/risk management measures given i	n section 2 are implemented [G29]
3.2. Environment	Predicted exposures are not expected to exceed the applicable exposure limits when the
	operational conditions/risk management measures given in section 2 are implemented
	[G29]
Section 4	Guidance to check compliance with the Exposure Scenario
4.1. Health	
The ECETOC TRA tool has been used to estir	nate workplace exposures unless otherwise indicated [G21] version 2.0
4.2. Environment	
	EUSES 2.1 has been used to estimate environmental exposure [EE3] unless otherwise
	indicated.
Section 5	Additional good practice advice beyond the REACH Chemical Safety Assessment
Control of Worker Exposure	
Cleaning [CS47]	Clear spills immediately [C&H13]: Wear chemically resistant gloves (tested to EN374) in
	combination with specific activity training [PPE17] and Use suitable eye protection
	[PPE26]
Emptying bags	In case the solid substance is lumpy or is one big lump crush the substance carefully in a
	sealed/closed (plastic) bag. Avoid any breakage of the bag during handling.
Use of PPE	Skin protection:
000 0111	Gloves take attention to the breakthrough time of NaSCN. Train the employees putting on
	and off the gloves, and how to use gloves in a proper way.
	Respiratory protection: Respiratory: Wear a dispensible mask only once
	Respirators: - Wear a disposable mask only once
	- Clean the non-disposable masks after every use and storage in a clean
	box and area.
	Preferable to wear respirators ≤ 2 hours a day.

Product name: sodium thiocyanate

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ES2: Distribution and Formulation, sodium thiocyanate

1 Distribution and Formulation, sodium thiocyanate (formulated product, low dustiness)

Sodium thiocyanate solid and in an a	aqueous solution CAS: 540-72-7
Section 1	Exposure Scenario Title
Title	Distribution and Formulation of NaSCN (low dustiness)
Use Descriptor	Sector of Use: Industrial (SU3, SU8, SU9, SU10)
	Process Categories: PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b,
	PROC9, PROC10, PROC14, PROC15; PROC19
	Environmental Release Categories: ERC2
Processes, tasks, activities covered	Formulation, packing and re-packing of the substance (including drums and small packs) and
	his mixtures in batch or continuous operations, including storage, material transfers, mixing,
	tabletting, compression, pelletisation, extrusion, large and small scale packing, sampling,
	maintenance and laboratory activities. Loading (including marine vessel/barge, rail/road car
	and IBC loading) including its distribution.
GES exposure criteria	Worker
	DNEL (inhalation): 3.00 mg/m ³
	DNEL (skin): 1.68 mg/kg bw/day
	Not classified as 1 or 2 Carcinogenic Mutagenic and/or Reproduction toxic
	Environmental PNECs (SCN- equivalent)
	PNEC aqua (freshwater): 0.095 mg/L
	PNEC aqua (marine water): 0.0095 mg/L
	PNEC aqua (intermittent release): 0.0272 mg/L
	PNEC sediment (freshwater): 0.543 mg/kg sediment dw
	PNEC sediment (marine water): 0.0543 mg/kg sediment dw
	PNEC soil: 6.336 mg/kg soil dw
	PNEC stp: 30 mg/L
	PNEC oral: 1.667 mg/kg food
	Not classified as Persistent Bio Accumulation and toxic, nor very Persistent and very Bio
	accumulating
Section 2	Operational conditions and risk management measures
Section 2.1	Control of worker exposure
Product characteristics	
Physical form of product	Solid, low dustiness [OC1];
Thyologi form of product	Solid, vapor pressure: < 0.01 Pa
	Aqueous solution, vapor pressure of substance < 0.01 Pa (completely dissociated)
	rigations condition, rapor processes of casetarios visit in a (completely discondition)
	Exposure only by aerosols
Concentration of substance in product	Covers percentage substance in the product up to 100 % (unless stated differently) [G13].
Amounts used	Varies between milliliters (sampling) and cubic meters (material transfers) [OC13].
Frequency and duration of use	Covers daily exposures up to 8 hours (unless stated differently) [G2]
Human factors not influenced by risk management	Not applicable

Product name: sodium thiocyanate

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	Diogas y Froductos duimicos
Other Operational Conditions affecting	Assumes a good basic standard of occupational hygiene is implemented [G1]. Ensure
worker exposure	operatives are trained to minimize exposures [EI119].
	Assumes use at not > 20°C above ambient [G15]; Indoor [OC8]
Contributing Scenarios	Risk Management Measures
Due to eye irritating properties of the su	l bstance: Use suitable eye protection [PPE26].
Avoid skin contact.	
PROC1:	
General exposures (closed systems)	No specific measures identified [EI18].
[CS15].	
Material transfers [CS3]. Mixing	Recommendation:
operations (closed systems) [CS29].	Ensure the system is closed; Clear transfer lines prior to de-coupling [E39]; Drain down and
Process sampling [CS2] (closed	flush system prior to equipment break-in or maintenance [E55].
systems) [CS107]	
PROC2:	
General exposures (closed systems)	No specific measures identified [EI18].
[CS15]; Continuous process [CS54].	
Material transfers [CS3]; Mixing	Recommendation:
operations (closed systems) [CS29];	Ensure the system is closed.
Process sampling [CS2] (open	Clear transfer lines prior to de-coupling [E39]. Clear spills immediately [C&H13].
systems) [CS108].	
PROC3:	
General exposures (closed systems)	No specific measures identified [EI18].
[CS15]; Use in contained batch	
processes [CS37];	
Material transfers [CS3]; Mixing	Recommendation:
operations (closed systems) [CS29].	Ensure the system is closed; Drain down and flush system prior to equipment break-in or
Process sampling [CS2] (open	maintenance [E55]. Clear spills immediately [C&H13].
systems) [CS108].	
PROC4:	
General exposures [CS1]; Batch	>5%: Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee
process [CS55] (open systems) [CS108]	training [PPE16].
[Recommendation:
	Use bulk or semi-bulk handling systems [E43]; Use drum pumps [E53].
	Drain down and flush system prior to equipment break-in or maintenance [E55]. Clean
	equipment and the work area every day [C&H3]. Clear spills immediately [C&H13].
PROC5:	, , , , , , , , , , , , , , , , , , , ,
General exposures [CS1];	Wear chemically resistant gloves (tested to EN374) in combination with specific activity training
Mixing operations (open systems)	[PPE17].
[CS30]; Batch process [CS55];	
	Recommendation:
	Use bulk or semi-bulk handling systems [E43]; Use drum pumps [E53].
	Drain down and flush system prior to equipment break-in or maintenance [E55]. Clean
	1

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	equipment and the work area every day [C&H3].{Clear spills immediately [C&H13]
PROC8a:	
General exposures [CS1].	Wear chemically resistant gloves (tested to EN374) in combination with specific activity training
Non-dedicated facility [CS82]	[PPE17].
Material transfers [CS3];	
iviational transfers [000];	Recommendation:
	Use bulk or semi-bulk handling systems [E43]; Use drum pumps [E53];
	Drain down and flush system prior to equipment break-in or maintenance [E55]. Clean
	equipment and the work area every day [C&H3]. Clear spills immediately [C&H13].
	equipment and the work area every day [C&H3]. Clear spins infinediately [C&H13].
PROC8b:	
General exposures [CS1].	>5%: Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee
Dedicated facility [CS81] Material	training [PPE16].
transfers [CS3];	
	Recommendation:
	Use bulk or semi-bulk handling systems [E43]; Use drum pumps [E53].
	Drain down and flush system prior to equipment break-in or maintenance [E55]. Clean
	equipment and the work area every day [C&H3]. Clear spills immediately [C&H13].
PROC9:	
General exposures [CS1].;	>5%: Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee
Dedicated facility [CS81]	training [PPE16].
Material transfers [CS3]; Drum and	
small package filling [CS6];	Recommendation:
3[],	Drain down and flush system prior to equipment break-in or maintenance [E55]. Clean
	equipment and the work area every day [C&H]. Clear spills immediately [C&H13].
PROC10:	equipment and the ment alou every day feeting even opinio miniodiately feeting.
Rolling, Brushing [CS51] (open	Limit the substance content in the product to 25% [OC18] and Wear chemically resistant
systems) [CS108]; Roller, spreader,	gloves (tested to EN374) in combination with specific employee training [PPE17]
flow application [CS98]; General	giores (testes to Entern) in combination with opening on project training [1.1.2.17]
exposures [CS1];	Recommendation
	Use long handled tools where possible [E50]; Clean equipment and the work area every day
Equipment cleaning and maintenance	[C&H3]; Clear spills immediately [C&H13]; Avoid splashing [C&H15].
[CS39].	[Odrio], Olear Spins Infinediately [Odriro], Avoid Spiashing [Odriro].
PROC14:	
General exposures (open systems)	> 5%: Wear suitable gloves tested to EN374 [PPE15].
[CS16];	To the state of th
Production or preparation or articles by	Recommendation:
tabletting, compression, extrusion or	Drain down and flush system prior to equipment break-in or maintenance [E55]; Clear spills
pelletisation [CS100].	immediately [C&H13]; Clean equipment and the work area every day [C&H3].
PROC15:	ministration pour rog, clear equipment and the work area every day [our roj.
Laboratory activities [CS36];	No specific measures identified [EI18].
	Two specific friedsures luctifilied [L110].
Small scale [CS61]. Manual [CS34].	
PROC 19:	
Manual [CS34]; Mixing operations	Limit the substance content in the product to 5% [OC17] and
(open systems) [CS30].	Wear chemically resistant gloves (tested to EN374) in combination with specific activity training
,	[PPE17].

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I	I
	Recommendation:
	Clear spills immediately [C&H13]. Clean equipment and the work area every day [C&H3].
Section 2.2	Control of environmental exposure
Product characteristics	Non-hydrophobic [PrC4b]. Readily biodegradable [PrC5a].
Frequency and duration of use	Continuous release. [FD2] Emission Days (days/year): 300 [FD4].
Other Operational Conditions of use	Product applied in aqueous process solution with negligible volatilization [OOC23].
affecting environmental exposure	Local freshwater dilution factor: 10 [EF1]. Local marine water dilution factor: 100 [EF2];
	Spent process fluid discharged to wastewater. [OOC19]
Technical onsite conditions and	Spent process fluid discharged to wastewater. [OOC19]
measures to reduce or limit	
discharges, air emissions and releases	
to soil	
Organization measures to prevent/limit	Not applicable
release from site	
Conditions and measures related to	Not applicable
municipal sewage treatment plant	
Conditions and measures related to	External treatment and disposal of waste should comply with applicable local and/or national
external treatment of waste for	regulations [ETW3]
disposal	ingulations [=1110]
Conditions and measures related to	Not applicable
external recovery of waste	Тот аррисавіс
Other environmental control measures	Not applicable
additional to above	TWO applicable
Section 3	Exposure Estimation
3.1. Health	Proceedings of the control of the co
	o exceed the applicable exposure limits (given in section 8 of the eSDS when the operational
·	es given in section 2 are implemented [G29]
3.2. Environment	
	Predicted exposures are not expected to exceed the applicable exposure limits when the
	operational conditions/risk management measures given in section 2 are implemented [G29]
Section 4	Guidance to check compliance with the Exposure Scenario
4.1. Health	Guidando to oncok dompilance with the Exposure cochano
	I to estimate workplace exposures unless otherwise indicated [G21] version 2.0
4.2. Environment	EUSES 2.1 has been used to estimate environmental exposure [EE3] unless otherwise
	indicated.
Section 5	Additional good practice advice beyond the REACH Chemical Safety Assessment
occion o	Additional good practice device beyond the FIEAOT One mode during Assessment
Control of Worker Exposure	1
Cleaning [CS47]	Clear spills immediately [C&H13]; Wear chemically resistant gloves (tested to EN374) in
	combination with specific activity training [PPE17] and Use suitable eye protection [PPE26]
Emptying bags (solid)	In case the solid substance is lumpy or is one big lump crush the substance carefully in a
	sealed/closed (plastic) bag. Avoid any breakage of the bag during handling
	1 , , , , , , , , , , , , , , , , , , ,

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Use of PPE	Skin protection:
	Gloves take attention to the breakthrough time of NaSCN. Train the employees how to put on
	and off the gloves, and how to use gloves in a proper way.
	Respiratory protection:
	Respirators: - Wear a disposable mask only once
	- Clean the non-disposable masks after every use and storage in a clean box and
	area.
	Preferable to wear respirators ≤ 2 hours a day.

2 Distribution and Formulation, sodium thiocyanate (formulated product: medium dustiness)

ES2: Industrial Distribution- Formulation Sodium thiocyanate solid (formulated product: medium dustiness) CAS: 540-72-7	
Section 1	Exposure scenario Title
Title	Distribution and Formulation of solid NaSCN (medium dustiness).
Use Descriptor	Sector of Use: Industrial (SU3, SU8, SU9, SU10)
	Process Categories: PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9, PROC14, PROC15, PROC19.
	Environmental Release Categories: ERC2
Processes, tasks, activities covered	Covers the use in all kinds of applications of non spraying formulations including material receipt, storage, preparation and transfer, application by roller and brush, wiping, dip, equipment cleaning, maintenance and laboratory activities.
GES exposure criteria	Worker DNEL (inhalation): 3.00 mg/m³ DNEL (skin): 1.68 mg/kg bw/day Not classified as 1 or 2 Carcinogenic Mutagenic and/or Reproduction toxic Environmental PNECs (SCN- equivalent) PNEC aqua (freshwater): 0.095 mg/L PNEC aqua (marine water): 0.0095 mg/L PNEC aqua (intermittent release): 0.0272 mg/L PNEC sediment (freshwater): 0.543 mg/kg sediment dw PNEC sediment (marine water): 0.0543 mg/kg sediment dw PNEC soil: 6.336 mg/kg soil dw PNEC stp: 30 mg/L PNEC oral: 1.667 mg/kg food Not classified as Persistent Bio Accumulation and toxic, nor very Persistent and very Bio accumulating
Section 2	Operational conditions and risk management measures
Section 2.1	Control of worker exposure
Product characteristics	
Physical form of product	Solid, medium dustiness [OC2].
Concentration of substance in product	Covers percentage substance in the product up to 100 % (unless stated differently) [G13]
Amounts used	Varies between milliliters (sampling) and cubic meters (material transfers) [OC13]
Frequency and duration of use	Covers daily exposures up to 8 hours (unless stated differently) [G2]

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Human factors not influenced by risk management	Not applicable
	Assumes a good basis standard of assumptional busines is implemented [C1]. Ensure
Other Operational Conditions affecting worker exposure	Assumes a good basic standard of occupational hygiene is implemented [G1]. Ensure operatives are trained to minimize exposures [EI119].
	Assumes use at not > 20°C above ambient [G15];
	Assumes activities are at ambient temperature (unless stated differently) [G17].
	Indoor [OC8].
Contributing Scenarios	Risk Management Measures
Due to eye irritating properties of the sub	stance: Use suitable eye protection [PPE26].
Avoid skin contact.	
PROC1:	
General exposures (closed systems)	
[CS15].	No specific measures identified [EI18].
Material transfers [CS3]. Mixing	
operations (closed systems) [CS29].	
Process sampling [CS2] (closed	Recommendation:
systems) [CS107]	Ensure the system is close. Clear transfer lines prior to de-coupling [E39].
PROC2:	
General exposures (closed systems) [CS15];	>25%: Wear suitable gloves tested to EN374 [PPE15].
Material transfers [CS3]; Mixing	Recommendation:
operations (closed systems) [CS29];	Ensure the system is close. Clear transfer lines prior to de-coupling [E39]. Clear spills
Process sampling [CS2] (open systems)	immediately [C&H13].
[CS108].	
PROC3:	
General exposures (closed systems)	No specific measures identified [EI18].
[CS15]; Use in contained batch	
processes [CS37];	
Material transfers [CS3]; Mixing	Recommendation:
operations (closed systems) [CS29].	Ensure the system is closed. Drain down and flush system prior to equipment break-in or
Process sampling [CS2] (open systems)	maintenance [E55]. Clear spills immediately [C&H13].
[CS108].	
PROC4:	
General exposures [CS1]; Batch	Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee
process [CS55] (open systems) [CS108]	training [PPE16]. Plus:
	F 050/c. Austral country and appeal of the state of the s
	5-25%: Avoid carrying out operation for more than 4 hours [OC12]
	> 25 %: Ensure material transfers are under containment or extract ventilation [E66] or
	Provide extract ventilation to material transfer points and other openings [E82]. (Efficiency ≥ 80%).
	Recommendation:
	Use bulk or semi-bulk handling systems [E43]. Discharge sacks via suitable vented charge
	chute [E44].
	Drain down and flush system prior to equipment break-in or maintenance [E55]. Clean

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	equipment and the work area every day [C&H3]. Clear spills immediately [C&H13].
PROC5:	
General exposures [CS1]; Mixing operations (open systems) [CS30]; Batch process [CS55];	Wear chemically resistant gloves (tested to EN374) in combination with specific activity training [PPE17]. Plus:
[coss], amon process [coss],	5-25%: Avoid carrying out operation for more than 4 hours [OC12]
	> 25 %: Ensure material transfers are under containment or extract ventilation [E66] or Provide extract ventilation to material transfer points and other openings [E82]. (Efficiency ≥ 80%).
	Recommendation:
	Use bulk or semi-bulk handling systems [E43]. Discharge sacks via suitable vented charge chute [E44].
	Drain down and flush system prior to equipment break-in or maintenance [E55]. Clean equipment and the work area every day [C&H3]. Clear spills immediately [C&H13].
PROC8a:	equipment and the work area every day [Ourlo]. Oreal spins infinediately [Ourlo].
General exposures [CS1]. Non-dedicated facility [CS82] Material transfers [CS3];	Wear chemically resistant gloves (tested to EN374) in combination with specific activity training [PPE17]. Plus:
. ,	5-25%: Avoid carrying out operation for more than 4 hours [OC12]
	> 25 %: Ensure material transfers are under containment or extract ventilation [E66] or Provide extract ventilation to material transfer points and other openings [E82]. (Efficiency ≥ 80%).
	Recommendation: Use bulk or semi-bulk handling systems [E43]. Discharge sacks via suitable vented charge chute [E44].
	Drain down and flush system prior to equipment break-in or maintenance [E55]. Clean equipment and the work area every day [C&H3]. Clear spills immediately [C&H13].
PROC8b: General exposures [CS1]. Dedicated facility [CS81] Material transfers [CS3];	Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training [PPE16]. Plus:
	5-25%: Avoid carrying out operation for more than 4 hours [OC12] > 25 %: Ensure material transfers are under containment or extract ventilation [E66] or Provide extract ventilation to material transfer points and other openings [E82]. (Efficiency ≥ 80%).
	Recommendation:
	Use bulk or semi-bulk handling systems [E43]. Discharge sacks via suitable vented charge chute [E44].
	Drain down and flush system prior to equipment break-in or maintenance [E55]. Clean equipment and the work area every day [C&H3]. Clear spills immediately [C&H13].
PROC9:	
General exposures [CS1].; Dedicated facility [CS81] Material transfers [CS3]; Drum and	Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training [PPE16]. Plus:
small package filling [CS6];	5-25%: Avoid carrying out operation for more than 4 hours [OC12]
	<u> </u>

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	> 25 %: Ensure material transfers are under containment or extract ventilation [E66] or
	Provide extract ventilation to material transfer points and other openings [E82].
	(Efficiency ≥ 80%).
	Recommendation:
	Use bulk or semi-bulk handling systems [E43]. Discharge sacks via suitable vented charge
	chute [E44].
	Drain down and flush system prior to equipment break-in or maintenance [E55]. Clean
	equipment and the work area every day [C&H3]. Clear spills immediately [C&H13].
PROC14:	50/ Many system of the state of the ENOTA IDDE 451
General exposures (open systems) [CS16];	> 5%: Wear suitable gloves tested to EN374 [PPE15].
Production or preparation or articles by	Recommendation:
tabletting, compression, extrusion or	Clean equipment and the work area every day [C&H3]. Clear spills immediately [C&H13].
pelletisation [CS100].	
PROC15:	
Laboratory activities [CS36];	No specific measures identified [EI18].
Small scale [CS61]. Manual [CS34].	
PROC 19:	
Manual [CS34]; Mixing operations (open	Limit the substance content in the product to 5% [OC17];
systems) [CS30].	
	Avoid carrying out operation for more than 1 hour [OC11];
	Wear chemically resistant gloves (tested to EN374) in combination with specific activity
	I training (DDE17)
	training [PPE17].
	training [FFL17].
	Recommendation:
Ocation 0.0	Recommendation: Clean equipment and the work area every day [C&H3]. Clear spills immediately [C&H13].
Section 2.2	Recommendation:
Product characteristics	Recommendation: Clean equipment and the work area every day [C&H3]. Clear spills immediately [C&H13]. Control of environmental exposure Non-hydrophobic [PrC4b]. Readily biodegradable [PrC5a].
	Recommendation: Clean equipment and the work area every day [C&H3]. Clear spills immediately [C&H13]. Control of environmental exposure
Product characteristics	Recommendation: Clean equipment and the work area every day [C&H3]. Clear spills immediately [C&H13]. Control of environmental exposure Non-hydrophobic [PrC4b]. Readily biodegradable [PrC5a].
Product characteristics Frequency and duration of use	Recommendation: Clean equipment and the work area every day [C&H3]. Clear spills immediately [C&H13]. Control of environmental exposure Non-hydrophobic [PrC4b]. Readily biodegradable [PrC5a]. Continuous release. [FD2] Emission Days (days/year): 300 [FD4].
Product characteristics Frequency and duration of use Other Operational Conditions of use	Recommendation: Clean equipment and the work area every day [C&H3]. Clear spills immediately [C&H13]. Control of environmental exposure Non-hydrophobic [PrC4b]. Readily biodegradable [PrC5a]. Continuous release. [FD2] Emission Days (days/year): 300 [FD4]. Product applied in aqueous process solution with negligible volatilization [OOC23].
Product characteristics Frequency and duration of use Other Operational Conditions of use	Recommendation: Clean equipment and the work area every day [C&H3]. Clear spills immediately [C&H13]. Control of environmental exposure Non-hydrophobic [PrC4b]. Readily biodegradable [PrC5a]. Continuous release. [FD2] Emission Days (days/year): 300 [FD4]. Product applied in aqueous process solution with negligible volatilization [OOC23]. Local freshwater dilution factor: 10 [EF1]. Local marine water dilution factor: 100 [EF2];
Product characteristics Frequency and duration of use Other Operational Conditions of use affecting environmental exposure	Recommendation: Clean equipment and the work area every day [C&H3]. Clear spills immediately [C&H13]. Control of environmental exposure Non-hydrophobic [PrC4b]. Readily biodegradable [PrC5a]. Continuous release. [FD2] Emission Days (days/year): 300 [FD4]. Product applied in aqueous process solution with negligible volatilization [OOC23]. Local freshwater dilution factor: 10 [EF1]. Local marine water dilution factor: 100 [EF2]; Spent process fluid discharged to wastewater. [OOC19]
Product characteristics Frequency and duration of use Other Operational Conditions of use affecting environmental exposure Technical onsite conditions and	Recommendation: Clean equipment and the work area every day [C&H3]. Clear spills immediately [C&H13]. Control of environmental exposure Non-hydrophobic [PrC4b]. Readily biodegradable [PrC5a]. Continuous release. [FD2] Emission Days (days/year): 300 [FD4]. Product applied in aqueous process solution with negligible volatilization [OOC23]. Local freshwater dilution factor: 10 [EF1]. Local marine water dilution factor: 100 [EF2]; Spent process fluid discharged to wastewater. [OOC19]
Product characteristics Frequency and duration of use Other Operational Conditions of use affecting environmental exposure Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organization measures to prevent/limit	Recommendation: Clean equipment and the work area every day [C&H3]. Clear spills immediately [C&H13]. Control of environmental exposure Non-hydrophobic [PrC4b]. Readily biodegradable [PrC5a]. Continuous release. [FD2] Emission Days (days/year): 300 [FD4]. Product applied in aqueous process solution with negligible volatilization [OOC23]. Local freshwater dilution factor: 10 [EF1]. Local marine water dilution factor: 100 [EF2]; Spent process fluid discharged to wastewater. [OOC19]
Product characteristics Frequency and duration of use Other Operational Conditions of use affecting environmental exposure Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organization measures to prevent/limit release from site	Recommendation: Clean equipment and the work area every day [C&H3]. Clear spills immediately [C&H13]. Control of environmental exposure Non-hydrophobic [PrC4b]. Readily biodegradable [PrC5a]. Continuous release. [FD2] Emission Days (days/year): 300 [FD4]. Product applied in aqueous process solution with negligible volatilization [OOC23]. Local freshwater dilution factor: 10 [EF1]. Local marine water dilution factor: 100 [EF2]; Spent process fluid discharged to wastewater. [OOC19] Spent process fluid discharged to wastewater. [OOC19]
Product characteristics Frequency and duration of use Other Operational Conditions of use affecting environmental exposure Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organization measures to prevent/limit release from site Conditions and measures related to	Recommendation: Clean equipment and the work area every day [C&H3]. Clear spills immediately [C&H13]. Control of environmental exposure Non-hydrophobic [PrC4b]. Readily biodegradable [PrC5a]. Continuous release. [FD2] Emission Days (days/year): 300 [FD4]. Product applied in aqueous process solution with negligible volatilization [OOC23]. Local freshwater dilution factor: 10 [EF1]. Local marine water dilution factor: 100 [EF2]; Spent process fluid discharged to wastewater. [OOC19] Spent process fluid discharged to wastewater. [OOC19]
Product characteristics Frequency and duration of use Other Operational Conditions of use affecting environmental exposure Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organization measures to prevent/limit release from site Conditions and measures related to municipal sewage treatment plant	Recommendation: Clean equipment and the work area every day [C&H3]. Clear spills immediately [C&H13]. Control of environmental exposure Non-hydrophobic [PrC4b]. Readily biodegradable [PrC5a]. Continuous release. [FD2] Emission Days (days/year): 300 [FD4]. Product applied in aqueous process solution with negligible volatilization [OOC23]. Local freshwater dilution factor: 10 [EF1]. Local marine water dilution factor: 100 [EF2]; Spent process fluid discharged to wastewater. [OOC19] Spent process fluid discharged to wastewater. [OOC19] Not applicable Not applicable
Product characteristics Frequency and duration of use Other Operational Conditions of use affecting environmental exposure Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organization measures to prevent/limit release from site Conditions and measures related to municipal sewage treatment plant Conditions and measures related to	Recommendation: Clean equipment and the work area every day [C&H3]. Clear spills immediately [C&H13]. Control of environmental exposure Non-hydrophobic [PrC4b]. Readily biodegradable [PrC5a]. Continuous release. [FD2] Emission Days (days/year): 300 [FD4]. Product applied in aqueous process solution with negligible volatilization [OOC23]. Local freshwater dilution factor: 10 [EF1]. Local marine water dilution factor: 100 [EF2]; Spent process fluid discharged to wastewater. [OOC19] Spent process fluid discharged to wastewater. [OOC19] Not applicable Not applicable External treatment and disposal of waste should comply with applicable local and/or national
Product characteristics Frequency and duration of use Other Operational Conditions of use affecting environmental exposure Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organization measures to prevent/limit release from site Conditions and measures related to municipal sewage treatment plant Conditions and measures related to external treatment of waste for disposal	Recommendation: Clean equipment and the work area every day [C&H3]. Clear spills immediately [C&H13]. Control of environmental exposure Non-hydrophobic [PrC4b]. Readily biodegradable [PrC5a]. Continuous release. [FD2] Emission Days (days/year): 300 [FD4]. Product applied in aqueous process solution with negligible volatilization [OOC23]. Local freshwater dilution factor: 10 [EF1]. Local marine water dilution factor: 100 [EF2]; Spent process fluid discharged to wastewater. [OOC19] Spent process fluid discharged to wastewater. [OOC19] Not applicable External treatment and disposal of waste should comply with applicable local and/or national regulations [ETW3]
Product characteristics Frequency and duration of use Other Operational Conditions of use affecting environmental exposure Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organization measures to prevent/limit release from site Conditions and measures related to municipal sewage treatment plant Conditions and measures related to external treatment of waste for disposal Conditions and measures related to	Recommendation: Clean equipment and the work area every day [C&H3]. Clear spills immediately [C&H13]. Control of environmental exposure Non-hydrophobic [PrC4b]. Readily biodegradable [PrC5a]. Continuous release. [FD2] Emission Days (days/year): 300 [FD4]. Product applied in aqueous process solution with negligible volatilization [OOC23]. Local freshwater dilution factor: 10 [EF1]. Local marine water dilution factor: 100 [EF2]; Spent process fluid discharged to wastewater. [OOC19] Spent process fluid discharged to wastewater. [OOC19] Not applicable Not applicable External treatment and disposal of waste should comply with applicable local and/or national
Product characteristics Frequency and duration of use Other Operational Conditions of use affecting environmental exposure Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organization measures to prevent/limit release from site Conditions and measures related to municipal sewage treatment plant Conditions and measures related to external treatment of waste for disposal	Recommendation: Clean equipment and the work area every day [C&H3]. Clear spills immediately [C&H13]. Control of environmental exposure Non-hydrophobic [PrC4b]. Readily biodegradable [PrC5a]. Continuous release. [FD2] Emission Days (days/year): 300 [FD4]. Product applied in aqueous process solution with negligible volatilization [OOC23]. Local freshwater dilution factor: 10 [EF1]. Local marine water dilution factor: 100 [EF2]; Spent process fluid discharged to wastewater. [OOC19] Spent process fluid discharged to wastewater. [OOC19] Not applicable External treatment and disposal of waste should comply with applicable local and/or national regulations [ETW3] Not applicable
Product characteristics Frequency and duration of use Other Operational Conditions of use affecting environmental exposure Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organization measures to prevent/limit release from site Conditions and measures related to municipal sewage treatment plant Conditions and measures related to external treatment of waste for disposal Conditions and measures related to	Recommendation: Clean equipment and the work area every day [C&H3]. Clear spills immediately [C&H13]. Control of environmental exposure Non-hydrophobic [PrC4b]. Readily biodegradable [PrC5a]. Continuous release. [FD2] Emission Days (days/year): 300 [FD4]. Product applied in aqueous process solution with negligible volatilization [OOC23]. Local freshwater dilution factor: 10 [EF1]. Local marine water dilution factor: 100 [EF2]; Spent process fluid discharged to wastewater. [OOC19] Spent process fluid discharged to wastewater. [OOC19] Not applicable External treatment and disposal of waste should comply with applicable local and/or national regulations [ETW3]

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Section 3	Exposure Estimation
3.1. Health	<u> </u>
Predicted exposures are not	expected to exceed the applicable exposure limits (given in section 8 of the eSDS when the operational
conditions/risk of management	nt measures given in section 2 are implemented [G29]
3.2. Environment	Predicted exposures are not expected to exceed the applicable exposure limits when the
	operational conditions/risk management measures given in section 2 are implemented [G29]
Section 4	Guidance to check compliance with the Exposure Scenario
4.1. Health	
The ECETOC TRA tool has I	peen used to estimate workplace exposures unless otherwise indicated [G21] version 2.0
4.2. Environment	EUSES 2.1 has been used to estimate environmental exposure [EE3] unless otherwise
	indicated.
Section 5	Additional good practice advice beyond the REACH Chemical Safety Assessment
•	ed in this section have not been taken into account in the exposure estimates related to the They are not subject to obligation laid down in Article 37 (4) of REACH.
Control of Worker Exposure	
Cleaning [CS47]	Clear spills immediately [C&H13]; Wear chemically resistant gloves (tested to EN374) in
	combination with specific activity training [PPE17] and Use suitable eye protection [PPE26]
Use of PPE	Skin protection:
	Gloves take attention to the breakthrough time of NaSCN Train the employees how to
	correctly put on and off the gloves, and how to use gloves in a proper way.
	Respiratory protection:
	Respirators: - Wear a disposable mask only once
	- Clean the non-disposable masks after every use and storage in a clean box
	and area.
	Preferable to wear respirators ≤ 2 hours a day.

3. Distribution and Formulation, sodium thiocyanate (formulated product: high dustiness)

Issue date: 27-09-2013.

Section 1	Exposure scenario Title
Title	Distribution and Formulation of solid NaSCN (high dustiness).
Use Descriptor	Sector of Use: Industrial (SU3, SU8, SU9, SU10)
	Process Categories: PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b,
	PROC9, PROC14, PROC15, PROC19;
	Environmental Release Categories: ERC2
Processes, tasks, activities covered	Covers the use in all kinds of applications of non spraying formulations including material
	receipt, storage, preparation and transfer, application by roller and brush, wiping, dip,
	equipment cleaning, maintenance and laboratory activities.
GES exposure criteria	Worker
	DNEL (inhalation): 3.00 mg/m ³
	DNEL (skin): 1.68 mg/kg bw/day

Product name: sodium thiocyanate Version #: 2.0 Revision date: 27-09-2013.



Not classified as 1 or 2 Carcinogenic Mutagenic and/or Reproduction toxic **Environmental PNECs (SCN- equivalent)** PNEC agua (freshwater): 0.095 mg/L PNEC agua (marine water): 0.0095 mg/L PNEC agua (intermittent release): 0.0272 mg/L PNEC sediment (freshwater): 0.543 mg/kg sediment dw PNEC sediment (marine water): 0.0543 mg/kg sediment dw PNEC soil: 6.336 mg/kg soil dw PNEC stp: 30 mg/L PNEC oral: 1.667 mg/kg food Not classified as Persistent Bio Accumulation and toxic, nor very Persistent and very Bio accumulating Section 2 Operational conditions and risk management measures Section 2.1 Control of worker exposure **Product characteristics** Physical form of product Solid, high dustiness [OC6]. Covers percentage substance in the product up to 25 % (unless stated differently) [G12]. Concentration of substance in product Amounts used Varies between milliliters (sampling) and cubic meters (material transfers) [OC13]. Frequency and duration of use Covers daily exposures up to 8 hours (unless stated differently) [G2] Human factors not influenced by risk Not applicable management Other Operational Conditions affecting Assumes a good basic standard of occupational hygiene is implemented [G1]. Ensure operatives are trained to minimize exposures [EI119]. worker exposure Assumes use at not > 20°C above ambient [G15]; Assumes activities are at ambient temperature (unless stated differently) [G17]. Indoor [OC8]. **Contributing Scenarios Risk Management Measures** Due to eye irritating properties of the substance: Use suitable eye protection [PPE26]. Avoid skin contact Covers percentage substance in the product up to 25 % (unless stated differently) [G12]. PROC1: General exposures (closed systems) up to 100%: No specific measures identified [El18]. [CS15]. Material transfers [CS3]. Mixing operations (closed systems) [CS29]. Recommendation: Process sampling [CS2] (closed Ensure the system is closed. Drain down and flush system prior to equipment break-in or systems) [CS107] maintenance [E55]. PROC2: General exposures (closed systems) No specific measures identified [EI18]. [CS15]; Material transfers [CS3]; Mixing Recommendation: operations (closed systems) [CS29]; Handle substance within a closed system [E47]. Drain down and flush system prior to Process sampling [CS2] (open systems) equipment break-in or maintenance [E55]. Clear spills immediately [C&H13].

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[CS108].	
PD000	
PROC3: General exposures (closed systems) [CS15]; Use in contained batch processes [CS37];	up to 100%: No specific measures identified [EI18].
Material transfers [CS3]; Mixing operations (closed systems) [CS29]. Process sampling [CS2] (open systems) [CS108].	Recommendation: Ensure the system is closed; Drain down and flush system prior to equipment break-in or maintenance [E55]. Clear spills immediately [C&H13].
PROC4: General exposures [CS1]; Batch process [CS55] (open systems) [CS108]	Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training [PPE16]. Plus:
	5-25%: Ensure material transfers are under containment or extract ventilation [E66] or Provide extract ventilation to material transfer points and other openings [E82]. (Efficiency: ≥ 90%) Or Wear a respirator conforming to EN140 with Type A/P2 filter or better [PPE29] (Protection Factor ≥ 10). <5%: Wear a disposable mask FFP1 (Assigned Protection Factor: 4) or better And avoid carrying out operation for more than 4 hours [OC12] Or Avoid carrying out operation for more than 1 hour [OC11]
	Recommendation: Drain down and flush system prior to equipment break-in or maintenance [E55]. Clear spills immediately [C&H13]. Clean equipment and the work area every day [C&H3].
PROC5: General exposures [CS1]; Mixing operations (open systems) [CS30]; Batch process [CS55];	Wear chemically resistant gloves (tested to EN374) in combination with specific activity training [PPE17].
	5-25%: Ensure material transfers are under containment or extract ventilation [E66] or Provide extract ventilation to material transfer points and other openings [E82]. (Efficiency: ≥ 90%) Or Wear a respirator conforming to EN140 with Type A/P2 filter or better [PPE29] (Protection Factor ≥ 10). <5%: Wear a disposable mask FFP1 (Assigned Protection Factor: 4) or better And avoid carrying out operation for more than 4 hours [OC12]
	Recommendation: Drain down and flush system prior to equipment break-in or maintenance [E55]. Clear spills immediately [C&H13]. Clean equipment and the work area every day [C&H3].
PROC8a: General exposures [CS1]. Non-dedicated facility [CS82] Material transfers [CS3];	Wear chemically resistant gloves (tested to EN374) in combination with specific activity training [PPE17]. Plus:

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	5-25%: Avoid carrying out operation for more than 4 hours [OC12], Plus Ensure material transfers are under containment or extract ventilation [E66] or Provide extract ventilation to material transfer points and other openings [E82] (Efficiency: ≥ 90%) Or Wear a respirator conforming to EN140 with Type A/P2 filter or better [PPE29] (Protection Factor ≥ 10). <5%: Ensure material transfers are under containment or extract ventilation [E66] or Provide extract ventilation to material transfer points and other openings [E82] (Efficiency: ≥ 90%) Or Wear a disposable mask FFP1 (Assigned Protection Factor: 4) or better And avoid carrying out operation for more than 4 hours [OC12] Or Avoid carrying out operation for more than 1 hour [OC11
	Recommendation: Drain down and flush system prior to equipment break-in or maintenance [E55]. Clear spills immediately [C&H13]. Clean equipment and the work area every day [C&H3].
PROC8b:	y the man and the mean and the man and the
General exposures [CS1]. Dedicated facility [CS81] Material transfers [CS3];	Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training [PPE16]. Plus:
	5-25%: Ensure material transfers are under containment or extract ventilation [E66] or Provide extract ventilation to material transfer points and other openings [E82]. (Efficiency: ≥ 90%) Or Wear a respirator conforming to EN140 with Type A/P2 filter or better [PPE29] (Protection Factor ≥ 10). <5%: Wear a disposable mask FFP1 (Assigned Protection Factor: 4) or better And avoid carrying out operation for more than 4 hours [OC12] Or Avoid carrying out operation for more than 1 hour [OC11]
	Recommendation:
	Drain down and flush system prior to equipment break-in or maintenance [E55]. Clean equipment and the work area every day [C&H3]; Clear spills immediately [C&H13].
PROC9: General exposures [CS1].; Dedicated facility [CS81] Material transfers [CS3]; Drum and small	Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training [PPE16]. Plus:
package filling [CS6];	5-25%: Provide extract ventilation to material transfer points and other openings [E82]; Ensure material transfers are under containment or extract ventilation [E66] (Efficiency: ≥ 90%). Or Wear a disposable dust mask (FFP1, Assigned Protection Factor: 4) or better and Avoid carrying out operation for more than 4 hour [OC12]. < 5%: Avoid carrying out operation for more than 4 hour [OC12]
	Recommendation: Drain down and flush system prior to equipment break-in or maintenance [E55]. Clean equipment and the work area every day [C&H3]; Clear spills immediately [C&H13].
PROC14: General exposures (open systems) [CS16]; Production or preparation or articles by	Wear suitable gloves tested to EN374 [PPE15]. Plus:
tabletting, compression, extrusion or pelletisation [CS100].	5 - 25%: Provide extract ventilation to material transfer points and other openings [E82]; Ensure material transfers are under containment or extract ventilation [E66]. (Efficiency: ≥ 90%) Or
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	Avoid carrying out operation for more than 1 hours [OC11] Or
	Avoid carrying out operation for more than 4 hours [OC12] and Wear a disposable
	dust mask (FFP1, Assigned Protection Factor: 4) or better
	Recommendation:
	Clear spills immediately [C&H13]; Clean equipment and the work area every day [C&H3].
PROC15:	
Laboratory activities [CS36];	Handle in a fume cupboard or under extract ventilation [E83]. (Efficiency: ≥ 80%)
Small scale [CS61]. Manual [CS34].	
PROC 19:	
Manual [CS34]; Mixing operations (open	Limit the substance content in the product to 5% [OC17].
systems) [CS30].	
	Wear chemically resistant gloves (tested to EN374) in combination with specific activity training [PPE17]. Plus:
	Avoid carrying out operation for more than 4 hours [OC11] and Wear a respirator conforming to EN140 with Type A/P2 filter or better [PPE29] (Protection Factor ≥ 10).
	Recommendation:
	Clear spills immediately [C&H13]. Clean equipment and the work area every day [C&H3].
Section 2.2	Control of environmental exposure
Product characteristics	Non-hydrophobic [PrC4b]. Readily biodegradable [PrC5a].
Frequency and duration of use	Continuous release. [FD2] Emission Days (days/year): 300 [FD4].
Other Operational Conditions of use	Product applied in aqueous process solution with negligible volatilization [OOC23].
affecting environmental exposure	Local freshwater dilution factor: 10 [EF1]. Local marine water dilution factor: 100 [EF2];
	Spent process fluid discharged to wastewater. [OOC19]
Technical onsite conditions and	Spent process fluid discharged to wastewater. [OOC19]
measures to reduce or limit discharges,	
air emissions and releases to soil	
Organization measures to prevent/limit	Not applicable
release from site	
Conditions and measures related to	Not applicable
municipal sewage treatment plant	
Conditions and measures related to	External treatment and disposal of waste should comply with applicable local and/or national
external treatment of waste for disposal	regulations [ETW3]
Conditions and measures related to	Not applicable
external recovery of waste	
Other environmental control measures	Not applicable
additional to above	
Section 3	Exposure Estimation
3.1. Health	
Predicted exposures are not expected to	exceed the applicable exposure limits (given in section 8 of the eSDS when the operational
conditions/risk of management measures	· · · · · · · · · · · · · · · · · · ·
3.2. Environment	Predicted exposures are not expected to exceed the applicable exposure limits when the
	operational conditions/risk management measures given in section 2 are implemented [G29]
Section 4	Guidance to check compliance with the Exposure Scenario

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4.4. Haalib	
4.1. Health	
The ECETOC TRA tool has b	peen used to estimate workplace exposures unless otherwise indicated [G21] version 2.0
4.2. Environment	EUSES 2.1 has been used to estimate environmental exposure [EE3] unless otherwise
	indicated.
Section 5	Additional good practice advice beyond the REACH Chemical Safety Assessment
Note: The measures reporte	ed in this section have not been taken into account in the exposure estimates related to the exposure
scenario above. They are no	ot subject to obligation laid down in Article 37 (4) of REACH.
•	
Control of Worker Exposure	
Cleaning [CS47]	Clear spills immediately [C&H13]; Wear chemically resistant gloves (tested to EN374) in
	combination with specific activity training [PPE17] and Use suitable eye protection [PPE26]
Use of PPE	Skin protection:
	Gloves take attention to the breakthrough time of NaSCN. Train the employees how to put on
	and off the gloves and how to use gloves in a proper way.
	Respiratory protection:
	Respirators: - Wear a disposable mask only once
	- Clean the non-disposable masks after every use and storage in a clean box
	and area.
	Preferable to wear respirators ≤ 2 hours a day.

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ES3: Use as an intermediate or in synthesis (100% solid and 50% aqueous solution)

Describtion of ES 3

Section 1	Exposure Scenario Title
Title	Use of NaSCN as an intermediate or as a process chemical or extraction agent in
	synthesis (low dustiness)
Use Descriptor	Sector of Use: Industrial (SU 3, SU8, SU9)
·	Process Categories: PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b,
	PROC10, PROC15;
	Environmental Release Categories: ERC 4, ERC6a, ERC8a
Processes, tasks, activities covered	Use of NASCN as an intermediate or process chemical or extraction agent. Includes
1 Tocesses, tasks, activities covered	recycling/recovery, material transfers, storage, maintenance and (un)loading (including
	road car and bulk container), sampling and associated laboratory activities.
050	
GES exposure criteria	Worker DNEL (inhalation): 3.00 mg/m ³
	, , , , , , , , , , , , , , , , , , ,
	DNEL (skin): 1.68 mg/kg bw/day
	Not classified as 1 or 2 Carcinogenic Mutagenic and/or Reproduction toxic
	Environmental PNECs (SCN- equivalent)
	PNEC aqua (freshwater): 0.095 mg/L
	PNEC aqua (marine water): 0.0095 mg/L
	PNEC aqua (intermittent release): 0.0272 mg/L
	PNEC sediment (freshwater): 0.543 mg/kg sediment dw
	PNEC sediment (marine water): 0.0543 mg/kg sediment dw
	PNEC soil: 6.336 mg/kg soil dw
	PNEC stp: 30 mg/L
	PNEC oral: 1.667 mg/kg food
	Not classified as Persistent Bio Accumulation and toxic, nor very Persistent and very Bi
	accumulating
Section 2	Operational conditions and risk management measures
Section 2.1	Control of worker exposure
	·
Product characteristics	Tarana and a same a
Physical form of product	Solid, low dustiness [OC1];
	Solid, vapor pressure: <<0.01 Pa
	Aqueous solution, vapor pressure of substance: << 0.01 Pa (completely dissociated)
	Exposure only by aerosols
Concentration of substance in product	Covers percentage substance in the product up to 100 % (unless stated differently)
Concentration of Substance in product	[G13].
Amounts used	Varies between milliliters (sampling) and cubic meters (material transfers) [OC13].
Frequency and duration of use	Covers daily exposures up to 8 hours (unless stated differently) [G2]
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Human factors not influenced by risk	Not applicable
management	

Product name: sodium thiocyanate

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ES3: Industrial use of Sodium thiocyanate as an intermediate or in synthesis 100% solid and 50% in an aqueous solution CAS: 540-72-7	
Other Operational Conditions affecting worker	Assumes a good basic standard of occupational hygiene is implemented [G1]. Ensure
exposure	operatives are trained to minimize exposures [EI119].
	Assumes use at not > 20°C above ambient [G15];
	Indoor [OC8] and Outdoor [OC9]. Solid and solution
Contributing Scenarios	Risk Management Measures
Due to eye irritating properties of the substance Avoid skin contact.	e: Use suitable eye protection [PPE26].
PROC 1 Continuous process [CS54]. Batch process [CS55]. General exposures (closed systems) [CS15].	No specific measures identified [EI18].
Process sampling [CS2]. Material transfers	Recommendation:
[CS3].	Ensure the system is closed; Clear transfer lines prior to de-coupling [E39]; Drain down and flush system prior to equipment break-in or maintenance [E55].
PROC 2	and must system prior to equipment break-in or maintenance [£55].
Continuous process [CS54]. General exposures [CS1].	No specific measures identified [EI18].
Material transfers [CS3] (closed systems)	Recommendation:
[CS107]. Process sampling [CS2] (open	Ensure the system is closed.
systems) [CS108];	Clear transfer lines prior to de-coupling [E39]. Clear spills immediately [C&H13].
PROC 3	
Use in contained batch processes [CS37];	No specific measures identified [El18].
General exposures (closed systems) [CS15].	Recommendation:
Material transfers [CS3].	Ensure the system is closed; Drain down and flush system prior to equipment break-in or
	maintenance [E55]. Clear spills immediately [C&H13].
PROC 4	
Batch process [CS55]. General exposures (open systems) [CS16].	>5%: Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training [PPE16].
Material transfers [CS3]. Drum/batch	Recommendation:
transfers [CS8]. Bulk transfers [CS14].	Use bulk or semi-bulk handling systems [E43]; Use drum pumps [E53].
	Drain down and flush system prior to equipment break-in or maintenance [E55]. Clean
	equipment and the work area every day [C&H3]. Clear spills immediately [C&H13].
PROC 8a	
Non-dedicated facility [CS82]; General	Wear chemically resistant gloves (tested to EN374) in combination with specific activity
exposures (open systems) [CS16].	training [PPE17].
Material transfers [CS3].	Recommendation:
	Use bulk or semi-bulk handling systems [E43]; Use drum pumps [E53].
	Drain down and flush system prior to equipment break-in or maintenance [E55]. Clean
	equipment and the work area every day [C&H3]. Clear spills immediately [C&H13]
PROC 8b	
Dedicated facility [CS81]; General exposures	Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee

Product name: sodium thiocyanate

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ES3: Industrial use of Sodium thiocyanate a	as an intermediate or in synthesis 100% solid and 50% in an aqueous solution
CAS: 540-72-7	
(open systems) [CS16]. Material transfers [CS3].	training [PPE16].
	Recommendation:
	Use bulk or semi-bulk handling systems [E43]; Use drum pumps [E53];
	Drain down and flush system prior to equipment break-in or maintenance [E55]. Clean
	equipment and the work area every day [C&H3]. Clear spills immediately [C&H13].
PROC10 Rolling, Brushing [CS51] (open	
systems) [CS108]; Roller, spreader, flow	Limit the substance content in the product to 25% [OC17] and Wear chemically resistant
application [CS98]; General exposures [CS1];	gloves (tested to EN374) in combination with specific employee training [PPE17].
Equipment cleaning and maintenance [CS39].	Recommendation
	Use long handled tools where possible [E50]; Clean equipment and the work area every
	day [C&H3]; Clear spills immediately [C&H13]; Avoid splashing [C&H15].
PROC 15	
Laboratory activities [CS36]. Small scale	No specific measures identified [EI18].
[CS61]. Manual [CS34].	
Section 2.2	Control of environmental exposure
Product characteristics	Non-hydrophobic [PrC4b]. Readily biodegradable [PrC5a].
Frequency and duration of use	Continuous release. [FD2] Emission Days (days/year): 300 [FD4].
Other Operational Conditions of use affecting	Product applied in aqueous process solution with negligible volatilization [OOC23].
environmental exposure	Local freshwater dilution factor: 10 [EF1]. Local marine water dilution factor: 100 [EF2];
	Spent process fluid discharged to wastewater. [OOC19]
Technical onsite conditions and measures to	Spent process fluid discharged to wastewater. [OOC19]
reduce or limit discharges, air emissions and	
releases to soil	
Organization measures to prevent/limit	Not applicable
release from site	
Conditions and measures related to municipal	Not applicable
sewage treatment plant	
Conditions and measures related to external	External treatment and disposal of waste should comply with applicable local and/or
treatment of waste for disposal	national regulations [ETW3]
Conditions and measures related to external	Not applicable
recovery of waste	
Other environmental control measures	Not applicable
additional to above	
Section 3	Exposure Estimation
3.1. Health.	F
	ed the applicable exposure limits (given in section 8 of the SDS when the operational
conditions/risk management measures given in	
3.2. Environment	Predicted exposures are not expected to exceed the applicable exposure limits when the
	operational conditions/risk management measures given in section 2 are implemented
	[G29]
Section 4	Guidance to check compliance with the Exposure Scenario
4.1. Health	<u> </u>

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ES3: Industrial use of Sodium	thiocyanate as an intermediate or in synthesis 100% solid and 50% in an aqueous solution		
CAS: 540-72-7			
The ECETOC TRA tool has bee	n used to estimate workplace exposure unless otherwise indicated [G21] version2.0		
4.2. Environment			
	EUSES 2.1 has been used to estimate environmental exposure [EE3] unless otherwise indicated.		
Section 5	Additional good practice advice beyond the REACH Chemical Safety Assessment		
Control of Worker Exposure			
Cleaning [CS47]	Clear spills immediately [C&H13]: Wear chemically resistant gloves (tested to EN374) in combination with specific activity training [PPE17] and Use suitable eye protection [PPE26]		
Emptying bags	In case the solid substance is lumpy or is one big lump crush the substance carefully in a sealed/closed (plastic) bag. Avoid any breakage of the bag during handling.		
Use of PPE	Skin protection: Gloves take attention to the breakthrough time of NaSCN Train the employees how to put on and off the gloves and how to use gloves in a proper way.		
	Respiratory protection: Respirators: - Wear a disposable mask only once - Clean the non-disposable masks after every use and storage in a clean box and area. Preferable to wear respirators ≤ 2 hours a day.		

Product name: sodium thiocyanate
Version #: 2.0 Revision date: 27-09-2013. Issue date: 27-09-2013.



ES4: Use in spraying formulations (aqueous solution)

1 Describtion of ES4

Section 1	Exposure scenario Title
Title	Industrial and professional use of NaSCN in a spraying aqueous formulation (low pressure spraying).
Use Descriptor	Sector of Use Industrial and Professional: SU3, SU22;
	Process Categories: PROC1, PROC2, PROC3, PROC5, PROC7, PROC8a, PROC8b, PROC10, PROC11, PROC19;
	Environmental Release Categories: ERC4, ERC5, ERC8a
Processes, tasks, activities covered	Covers the use of formulated spraying product including weighing, transfer operations and automated and manual spraying applications.
GES exposure criteria	Worker DNEL (inhalation): 3.00 mg/m³ DNEL (skin): 1.68 mg/kg bw/day Not classified as 1 or 2 Carcinogenic Mutagenic and/or Reproduction toxic
	Environmental PNECs (SCN- equivalent) PNEC aqua (freshwater): 0.095 mg/L PNEC aqua (marine water): 0.0095 mg/L PNEC aqua (intermittent release): 0.0272 mg/L PNEC sediment (freshwater): 0.543 mg/kg sediment dw PNEC sediment (marine water): 0.0543 mg/kg sediment dw PNEC soil: 6.336 mg/kg soil dw PNEC stp: 30 mg/L PNEC oral: 1.667 mg/kg food Not classified as Persistent Bio Accumulation and toxic, nor very Persistent and very Bio accumulating
Section 2	Operational conditions and risk management measures
Section 2.1	Control of worker exposure
Physical form of product	Solid, low dustiness [OC1]; Solid, vapor pressure:< < 0.01 Pa Aqueous solution, vapor pressure of substance: << 0.01 Pa (completely dissociated) Exposure only by aerosols
Concentration of substance in	Covers percentage substance in the product up to 100 % (unless stated differently) [G13].
product	
Amounts used	Varies between milliliters (sampling) and cubic meters (material transfers) [OC13].
Frequency and duration of use	Covers daily exposures up to 8 hours (unless stated differently) [G2]
Human factors not influenced by risk management	Not applicable
Other Operational Conditions affecting worker exposure	Assumes a good basic standard of occupational hygiene is implemented [G1]. Ensure operatives are trained to minimize exposures [EI119].

Product name: sodium thiocyanate

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	Drogas y Productos Químicos	
	Assumes use at not > 20°C above ambient [G15];	
	Assumes activities are at ambient temperature (unless stated differently) [G17]. Indoor [OC8].	
Contributing Scenarios	Risk Management Measures	
Due to eye irritating properties o	1 of the substance: Use suitable eye protection [PPE26].	
Avoid skin contact.		
PROC1 (industrial)		
General exposures (closed	Ensure the system is closed .	
systems) [CS15];	No specific measures identified [EI18].	
e.g.:		
Material transfers [CS3]		
(closed systems) [CS107];	Recommendation:	
Spraying [CS10] (closed	; Clear transfer lines prior to de-coupling [E39]; Drain down and flush system prior to equipment	
systems) [CS107];	break-in or maintenance [E55].	
E.g: Spraying by robots		
PROC2 (industrial)		
General exposures [CS1].	Ensure the system is closed	
Continuous process [CS54].	No specific measures identified [EI18].	
Automated process with (semi)		
closed systems [CS93];		
Spraying [CS10] (closed		
systems) [CS107];	Recommendation:	
E.g: Spraying by robots	Ticommentation.	
Lig. op.ayg 27 resete	Drain down and flush system prior to equipment break-in or maintenance [E55]. Clear transfer lines	
	prior to de-coupling [E39]; Clear spills immediately [C&H13].	
PROC3 (industrial)	prior to do coupring [250], croar opino mimodiatory [carrroj.	
General exposures (closed	Ensure the system is closed;	
systems) [CS15].	No specific measures identified [El18].	
Use in contained batch	The opening measures racination (E110).	
processes [CS37].		
processes [8667].		
Spraying [CS10] (closed	Recommendation:	
systems) [CS107];	Drain down and flush system prior to equipment break-in or maintenance [E55]. Clear spills	
E.g: Spraying by robots	immediately [C&H13].	
PROC5:		
General exposures (open	Wear chemically resistant gloves (tested to EN374) in combination with specific activity training	
systems) [CS16]. Mixing	[PPE17].	
operations (open systems)		
[CS30]. Batch process [CS55].	Recommendation:	
	Use drum pumps [E53].	
	Drain down and flush system prior to equipment break-in or maintenance [E55]. Clean equipment and	
	the work area every day [C&H3].Clear spills immediately [C&H13]	
PROC7 (industrial low		
pressure spraying):	Limit the substance content in the product to 25% [OC18] And Wear chemically resistant gloves	
General exposures (open	(tested to EN374) in combination with specific activity training [PPE17]	
systems) [CS16].	Plus:	

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l	
Spraying [CS10]	
	5-25%: Avoid carrying out operation for more than 4 hours [OC12]
	Recommendation:
	Clean equipment and the work area every day [C&H3]. Clear spills immediately [C&H13]
PROC8a:	Clear equipment and the work area every day [earreg-clear opinio immediatory [earring
General exposures (open	Wear chemically resistant gloves (tested to EN374) in combination with specific activity training
systems) [CS16].	[PPE17].
Non-dedicated facility [CS82];	
, i	Recommendation:
Material transfers [CS3];	Use drum pumps [E53];
	Drain down and flush system prior to equipment break-in or maintenance [E55]. Clean equipment and
	the work area every day [C&H3]. Clear spills immediately [C&H13].
PROC8b:	
General exposures (open	> 5%: Wear chemically resistant gloves (tested to EN374) in combination with specific activity training
systems) [CS16]; Dedicated	[PPE17].
facility [CS81].	
	Recommendation:
Material transfers [CS3];	Use drum pumps [E53].
	Drain down and flush system prior to equipment break-in or maintenance [E55]. Clean equipment and
	the work area every day [C&H3]. Clear spills immediately [C&H13].
PROC10	
Rolling, Brushing [CS51] (open	Limit the substance content in the product to 25% [OC18] and Wear chemically resistant gloves (tested
systems) [CS108]; Roller,	to EN374) in combination with specific activity training [PPE17].
spreader, flow application	to Error 1) in combination with opcome activity training [1 1 E17].
[CS98]; General exposures	Recommendation:
[CS1];	Use long handled tools where possible [E50]; Clean equipment and the work area every day [C&H3];
[]	Clear spills immediately [C&H13]; Avoid splashing [C&H15].
Equipment cleaning and	
maintenance [CS39].	
PROC11 (professional low	
pressure spraying)	Limit the substance content in the product to 25% [OC18] And
General exposures (open	Wear chemically resistant gloves (tested to EN374) in combination with specific activity training
systems) [CS16].	[PPE17].
Spraying [CS10]	Plus:
	5 050/s Assistant and the section for section for section (as a section for section)
	5-25%: Avoid carrying out operation for more than 4 hours [OC12]
	Recommendation:
	Clean equipment and the work area every day [C&H3]; Clear spills immediately [C&H13];
PROC 19:	
Manual [CS34];	Limit the substance content in the product to 5% [OC17] And
Mixing operations (open	Wear chemically resistant gloves (tested to EN374) in combination with specific activity training
systems) [CS30].	[PPE17].
	Recommendation:
	Stay upwind/keep distance from source [El22].

Product name: sodium thiocyanate

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Diogas y Froductos adminicos
Clear spills immediately [C&H13]. Clean equipment and the work area every day [C&H3].
Control of environmental exposure
Non-hydrophobic [PrC4b]. Readily biodegradable [PrC5a].
Emission Days (days/year): 20 [FD4].
Product applied in aqueous process solution with negligible volatilization [OOC23].
Local freshwater dilution factor: 10 [EF1]. Local marine water dilution factor: 100 [EF2];
Spent process fluid discharged to wastewater. [OOC19]
Not applicable
Not appliable
Not applicable
Not applicable
External treatment and disposal of waste should comply with applicable local and/or national
regulations [ETW3]
Not applicable
Not applicable
Exposure Estimation
pected to exceed the applicable exposure limits (given in section 8 of the eSDS when the operational
neasures given in section 2 are implemented [G29]
Predicted exposures are not expected to exceed the applicable exposure limits when the operational
conditions/risk management measures given in section 2 are implemented [G29]
Guidance to check compliance with the Exposure Scenario
used to estimate workplace exposures unless otherwise indicated [G21] version 2.0;
EUSES 2.1 has been used to estimate environmental exposure [EE3] unless otherwise indicated.
Additional good practice advice beyond the REACH Chemical Safety Assessment
n this section have not been taken into account in the exposure estimates related to the
y are not subject to obligation laid down in Article 37 (4) of REACH.
y are not subject to obligation laid down in Article 37 (4) of REACH.
y are not subject to obligation faid down in Article 37 (4) of NEACH.

Product name: sodium thiocyanate

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Use of PPE	Skin protection:
	Hand: Gloves take attention to the breakthrough time of NaSCN
	Body: Wear a disposable coverall with a good level of liquid protection (e.g.: Tyvek). Preferable to wear the coverall ≤ 4 hours a day.
	Train the employees putting on and off gloves plus coveralls and how to use these PPE in a proper
	way.
	Respiratory protection:
	Respirators: - Wear a disposable mask only once
	- Clean the non-disposable masks after every use and storage in a clean box and
	area.
	Preferable to wear respirators ≤ 2 hours a day.

Product name: sodium thiocyanate

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ES5: Use in non spraying formulations

1 ES5: Use in non spraying formulations, -low dustiness

CAS: 540-72-7	1
Section 1	Exposure scenario Title
Title	Industrial and professional use of NaSCN (low dustiness)
Use Descriptor	Sector of Use Industrial and Professional: SU3, SU22.
	Process Categories: PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC10, PROC13, PROC14, PROC19;
	Environmental Release Categories: ERC4, ERC5, ERC8a, ERC8b, ERC8c, ERC8d, ERC9
Processes, tasks, activities covered	Covers the use in all kinds of applications of non spraying formulations including material receipt, storage, preparation and transfer, application by roller and brush, wiping, dip, equipment cleaning, maintenance and laboratory activities.
GES exposure criteria	Worker DNEL (inhalation): 3.00 mg/m ³ DNEL (skin): 1.68 mg/kg bw/day Not classified as 1 or 2 Carcinogenic Mutagenic and/or Reproduction toxic
	Environmental PNECs (SCN- equivalent) PNEC aqua (freshwater): 0.095 mg/L PNEC aqua (marine water): 0.0095 mg/L PNEC aqua (intermittent release): 0.0272 mg/L PNEC sediment (freshwater): 0.543 mg/kg sediment dw PNEC sediment (marine water): 0.0543 mg/kg sediment dw PNEC soil: 6.336 mg/kg soil dw PNEC stp: 30 mg/L PNEC oral: 1.667 mg/kg food Not classified as Persistent Bio Accumulation and toxic, nor very Persistent and very Bio accumulating
Section 2	Operational conditions and risk management measures
Section 2.1	Control of worker exposure
Product characteristics	
Physical form of product	Solid, low dustiness [OC1]; Solid, vapor pressure: <<0.01 Pa Aqueous solution, vapor pressure of substance << 0.01 Pa (completely dissociated) Exposure only by aerosols
Concentration of substance in product	Covers percentage substance in the product up to 100 % (unless stated differently) [G13].
Amounts used	Varies between milliliters (sampling) and cubic meters (material transfers) [OC13].
Frequency and duration of use	Covers daily exposures up to 8 hours (unless stated differently) [G2]
Human factors not influenced by risk management	Not applicable

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Other Operational Conditions affecting worker exposure	Assumes a good basic standard of occupational hygiene is implemented [G1]. Ensure operatives are trained to minimize exposures [EI119].
worker exposure	operatives are trained to minimize exposures [E1115].
	Assumes use at not > 20°C above ambient [G15];
	Assumes activities are at ambient temperature (unless stated differently) [G17]. Indoor [OC8].
Contributing Scenarios	Risk Management Measures
Due to eye irritating properties of the su	l ubstance: Use suitable eye protection [PPE26].
Avoid skin contact.	
PROC1:	
General exposures (closed systems) [CS15];	No specific measures identified [El18].
e.g.:	
Material transfers [CS3]; Printing	Recommendation:
[CS11]; Treatment by dipping and	Ensure the system is closed;
pouring [CS35].	Clear transfer lines prior to de-coupling [E39]; Drain down and flush system prior to equipment
	break-in or maintenance [E55].
PROC2:	N
General exposures [CS1]. Continuous	No specific measures identified [EI18].
process [CS54]. Automated process	
with (semi) closed systems [CS93];	
e.g.:	
Material transfers [CS3]; Printing	
[CS11];	Recommendation:
Treatment by dipping and pouring	Ensure the system is closed.
[CS35];	Clear transfer lines prior to de-coupling [E39]. Clear spills immediately [C&H13].
PROC3:	
General exposures [CS1].	No specific measures identified [EI18].
Use in contained batch processes	
[CS37].	
e.g.:	
Material transfers [CS3]; Printing	Recommendation:
[CS11]; Treatment by dipping and	Ensure the system is closed;
pouring [CS35];	Drain down and flush system prior to equipment break-in or maintenance [E55]. Clear spills
7	immediately [C&H13].
PROC4:	
General exposures (open systems)	> 5%: Wear chemically resistant gloves (tested to EN374) in combination with specific activity
[CS16]; Batch process [CS55].	training [PPE17].
e.g.:	
Material transfers [CS3];	Recommendation:
Printing [CS11]; Treatment by dipping	Use bulk or semi-bulk handling systems [E43]; Use drum pumps [E53].
and pouring [CS35];	Drain down and flush system prior to equipment break-in or maintenance [E55]. Clean
	equipment and the work area every day [C&H3]. Clear spills immediately [C&H13].



BBOOS	
PROC5: General exposures (open systems) [CS16]. Batch process [CS55].	Wear chemically resistant gloves (tested to EN374) in combination with specific activity training [PPE17].
e.g.: Mixing operations [CS30]. Printing [CS108]; Roller, spreader, flow application [CS98]	Recommendation: Use bulk or semi-bulk handling systems [E43]; Use drum pumps [E53]. Drain down and flush system prior to equipment break-in or maintenance [E55]. Clean equipment and the work area every day [C&H3].{Clear spills immediately [C&H13]
PROC8a:	
General exposures (open systems) [CS16]. Non-dedicated facility [CS82];	Wear chemically resistant gloves (tested to EN374) in combination with specific activity training [PPE17].
Material transfers [CS3];	Recommendation: Use bulk or semi-bulk handling systems [E43]; Use drum pumps [E53]; Drain down and flush system prior to equipment break-in or maintenance [E55]. Clean equipment and the work area every day [C&H3]. Clear spills immediately [C&H13].
PROC8b:	
General exposures (open systems) [CS16]; Dedicated facility [CS81].	> 5%: Wear chemically resistant gloves (tested to EN374) in combination with specific activity training [PPE17].
Material transfers [CS3];	Recommendation: Use bulk or semi-bulk handling systems [E43]; Use drum pumps [E53]. Drain down and flush system prior to equipment break-in or maintenance [E55]. Clean equipment and the work area every day [C&H3]. Clear spills immediately [C&H13].
PROC10	
Rolling, Brushing [CS51] (open systems) [CS108]; Roller, spreader, flow application [CS98]; General exposures [CS1];	Limit the substance content in the product to 25% [OC18] and Wear chemically resistant gloves (tested to EN374) in combination with specific activity training [PPE17]. **Recommendation:**
Equipment cleaning and maintenance [CS39].	Use long handled tools where possible [E50]; Clean equipment and the work area every day [C&H3]; Clear spills immediately [C&H13]; Avoid splashing [C&H15].
PROC 13	
General exposures (open systems) [CS16]; Dipping, immersion and pouring [CS4].	Wear chemically resistant gloves (tested to EN374) in combination with specific activity training [PPE17].
	Recommendation:
	Clear spills immediately [C&H13]. Clean equipment and the work area every day [C&H3].
PROC14: Production or preparation or articles by tabletting, compression, extrusion	> 5%: Wear suitable gloves tested to EN374 [PPE15].
or pelletisation [CS100]; General	Recommendation:
exposures (open systems) [CS16].	Drain down and flush system prior to equipment break-in or maintenance [E55]. Clear spills immediately [C&H13]. Clean equipment and the work area every day [C&H3].



PROC 19:	
Manual [CS34];	Limit the substance content in the product to 5% [OC17] And
Mixing operations (open systems)	Wear chemically resistant gloves (tested to EN374) in combination with specific activity
[CS30].	training [PPE17].
	Recommendation:
	Stay upwind/keep distance from source [El22].
	Clear spills immediately [C&H13]. Clean equipment and the work area every day [C&H3].
Section 2.2	Control of environmental exposure
Product characteristics	Non-hydrophobic [PrC4b]. Readily biodegradable [PrC5a].
Frequency and duration of use	Emission Days (days/year): 100 [FD4].
Other Operational Conditions of use	Product applied in aqueous process solution with negligible volatilization [OOC23].
affecting environmental exposure	Local freshwater dilution factor: 10 [EF1]. Local marine water dilution factor: 100 [EF2];
	Spent process fluid discharged to wastewater. [OOC19]
Technical onsite conditions and	Not applicable
measures to reduce or limit	
discharges, air emissions and	
releases to soil	
Organization measures to	Not applicable
prevent/limit release from site	
Conditions and measures related to	Not applicable
municipal sewage treatment plant	
Conditions and measures related to	External treatment and disposal of waste should comply with applicable local and/or national
external treatment of waste for	regulations [ETW3]
disposal	
Conditions and measures related to	Not applicable
external recovery of waste	
Other environmental control measures	Not applicable
additional to above	
Section 3	Exposure Estimation
3.1. Health	
·	to exceed the applicable exposure limits (given in section 8 of the eSDS when the operational
conditions/risk of management measure	es given in section 2 are implemented [G29]
3.2. Environment	Predicted exposures are not expected to exceed the applicable exposure limits when the
	operational conditions/risk management measures given in section 2 are implemented [G29]
Section 4	Guidance to check compliance with the Exposure Scenario
4.1. Health	
The ECETOC TRA tool has been used	to estimate workplace exposures unless otherwise indicated [G21] version 2.0;
4.2. Environment	EUSES 2.1 has been used to estimate environmental exposure [EE3] unless otherwise
	indicated.
Section 5	Additional good practice advice beyond the REACH Chemical Safety Assessment
Control of Worker Exposure	
=	



Cleaning [CS47]	Clear spills immediately [C&H13]: Wear chemically resistant gloves (tested to EN374) in combination with specific activity training [PPE17] and Use suitable eye protection [PPE26]
Use of PPE	Skin protection: Gloves take attention to the breakthrough time of NaSCN Train the employees putting on and off the gloves, and how to use gloves in a proper way. Respiratory protection: Respirators: - Wear a disposable mask only once - Clean the non-disposable masks after every use and storage in a clean box and area. Preferable to wear respirators ≤ 2 hours a day.

2 ES5: Use in non-spraying formulations, medium dustiness

Section 1	Exposure scenario Title
Title	Industrial and Professional end-use of solid NaSCN (high dustiness).
Use Descriptor	Sector of Use: Industrial (SU3, SU8, SU9, SU10)
	Process Categories: PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b,
	PROC13, PROC14, PROC19;
	Environmental Release Categories: ERC2
Processes, tasks, activities covered	Covers the use in all kinds of applications of non spraying formulations including material
	receipt, storage, preparation and transfer, application by roller and brush, wiping, dipping,
	mixing.
GES exposure criteria	Worker
	DNEL (inhalation): 3.00 mg/m ³
	DNEL (skin): 1.68 mg/kg bw/day
	Not classified as 1 or 2 Carcinogenic Mutagenic and/or Reproduction toxic
	Environmental PNECs (SCN- equivalent)
	PNEC aqua (freshwater): 0.095 mg/L
	PNEC aqua (marine water): 0.0095 mg/L
	PNEC aqua (intermittent release): 0.0272 mg/L
	PNEC sediment (freshwater): 0.543 mg/kg sediment dw
	PNEC sediment (marine water): 0.0543 mg/kg sediment dw
	PNEC soil: 6.336 mg/kg soil dw
	PNEC stp: 30 mg/L
	PNEC oral: 1.667 mg/kg food
	Not classified as Persistent Bio Accumulation and toxic, nor very Persistent and very Bio
	accumulating
Section 2	Operational conditions and risk management measures
Section 2.1	Control of worker exposure
Product characteristics	
Physical form of product	Solid, high dustiness [OC6].
Concentration of substance in product	Covers percentage substance in the product up to 25 % (unless stated differently) [G12].
	Varies between milliliters (sampling) and cubic meters (material transfers) [OC13].

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	Diogas y Hoddictos dulifilidos
Frequency and duration of use	Covers daily exposures up to 8 hours (unless stated differently) [G2]
Human factors not influenced by risk	Not applicable
management	
Other Operational Conditions affecting	Assumes a good basic standard of occupational hygiene is implemented [G1]. Ensure
worker exposure	operatives are trained to minimize exposures [EI119].
·	
	Assumes use at not > 20°C above ambient [G15];
	Assumes activities are at ambient temperature (unless stated differently) [G17].
	Indoor [OC8].
Contributing Scenarios	Risk Management Measures
Due to eye irritating properties of the su	bstance: Use suitable eye protection [PPE26].
Avoid skin contact	
Covers percentage substance in the	product up to 25 % (unless stated differently) [G12].
PROC1:	
General exposures (closed systems)	up to 100%: No specific measures identified [El18].
[CS15].	
Material transfers [CS3]. Mixing	
operations (closed systems) [CS29].	Recommendation:
Process sampling [CS2] (closed	Ensure the system is closed. Drain down and flush system prior to equipment break-in or
systems) [CS107]	maintenance [E55].
PROC2:	
General exposures (closed systems)	Professional worker
[CS15];	5-25%: Avoid carrying out operation for more than 4 hours [OC12] And Wear suitable gloves
	tested to EN374 [PPE15]
Material transfers [CS3]; Mixing	(65)
operations (closed systems) [CS29];	Recommendation:
Process sampling [CS2] (open	Handle substance within a closed system [E47]. Drain down and flush system prior to
systems) [CS108].	equipment break-in or maintenance [E55]. Clear spills immediately [C&H13].
PROC3:	yespecial control of the control of
General exposures (closed systems)	Professional worker
[CS15]; Use in contained batch	5-25%: Avoid carrying out operation for more than 4 hours [OC12]
processes [CS37];	5 25 75 77 15 15 541 77 11 15 15 15 15 15 15 15 15 15 15 15 15
p. 255666 [6 667],	Recommendation:
Material transfers [CS3]; Mixing	Ensure the system is closed; Drain down and flush system prior to equipment break-in or
operations (closed systems) [CS29].	maintenance [E55]. Clear spills immediately [C&H13].
Process sampling [CS2] (open	markonanoo (200). Oldar opino illiindalatoiy (001110).
systems) [CS108].	
PROC4:	
General exposures [CS1]; Batch	Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee
process [CS55] (open systems)	training [PPE16]. Plus:
[CS108]	itaning [i i Lio]. i ido.
	Industrial worker
	5-25%: Ensure material transfers are under containment or extract ventilation [E66] or
	Provide extract ventilation to material transfer points and other openings [E82].
	(Efficiency: ≥ 90%) Or Wear a respirator conforming to EN140 with Type A/P2 filter or better [PPE29] (Protection Factor ≥ 10).
	<5%: Wear a disposable mask FFP1 (Assigned Protection Factor: 4) or better And avoid



	carrying out operation for more than 4 hours [OC12] Or Avoid carrying out operation for more than 1 hour [OC11]
	Professional worker 5-25%: Wear a respirator conforming to EN140 with Type A/P2 filter or better [PPE29] (Protection Factor ≥ 10) And avoid carrying out operation for more than 4 hours [OC12] <5%: Wear a disposable mask FFP1 (Assigned Protection Factor: 4) or better And avoid carrying out operation for more than 4 hours [OC12] Or Avoid carrying out operation for more than 1 hour [OC11]
	Recommendation:
	Drain down and flush system prior to equipment break-in or maintenance [E55]. Clear spills immediately [C&H13]. Clean equipment and the work area every day [C&H3].
PROC5: General exposures [CS1]; Mixing operations (open systems) [CS30]; Batch process [CS55];	Wear chemically resistant gloves (tested to EN374) in combination with specific activity training [PPE17].
[OSSO], Batch process [OSSS],	Industrial worker 5-25%: Ensure material transfers are under containment or extract ventilation [E66] or Provide extract ventilation to material transfer points and other openings [E82]. (Efficiency: ≥ 90%) Or Wear a respirator conforming to EN140 with Type A/P2 filter or better [PPE29] (Protection Factor ≥ 10). <5%: Wear a disposable mask FFP1 (Assigned Protection Factor: 4) or better And avoid carrying out operation for more than 4 hours [OC12] Or Avoid carrying out operation for more than 1 hour [OC11]
	Professional worker 5-25%: Wear a respirator conforming to EN140 with Type A/P2 filter or better [PPE29] (Protection Factor ≥ 10) And avoid carrying out operation for more than 4 hours [OC12] <5%: Wear a disposable mask FFP1 (Assigned Protection Factor: 4) or better And avoid carrying out operation for more than 4 hours [OC12] Or Avoid carrying out operation for more than 1 hour [OC11]
	Recommendation: Drain down and flush system prior to equipment break-in or maintenance [E55]. Clear spills
PROC8a: General exposures [CS1]. Non-dedicated facility [CS82] Material transfers [CS3];	immediately [C&H13]. Clean equipment and the work area every day [C&H3]. Wear chemically resistant gloves (tested to EN374) in combination with specific activity training [PPE17].
material transfers [000],	5-25%: Ensure material transfers are under containment or extract ventilation [E66] or Provide extract ventilation to material transfer points and other openings [E82] (Efficiency: ≥ 80%) And Avoid carrying out operation for more than 1 hour [OC11] Or Wear a respirator conforming to EN140 with Type A/P2 filter or better [PPE29] (Protection Factor ≥ 10). Avoid carrying out operation for more than 4 hours [OC12]. <5%: Ensure material transfers are under containment or extract ventilation [E66] or Provide extract ventilation to material transfer points and other openings [E82]

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	(Efficiency: ≥ 80%) Or Wear a disposable mask FFP1 (Assigned Protection Factor: 4)
	or better And avoid carrying out operation for more than 4 hours [OC12] Or Avoid
	carrying out operation for more than 1 hour [OC11]
	Recommendation:
	Drain down and flush system prior to equipment break-in or maintenance [E55]. Clear spills
	immediately [C&H13]. Clean equipment and the work area every day [C&H3].
PROC8b:	Infinediately [Odiffo]. Olean equipment and the work area every day [Odifo].
General exposures [CS1].	Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee
Dedicated facility [CS81] Material transfers [CS3];	training [PPE16]. Plus:
	Industrial worker
	 5-25%: Ensure material transfers are under containment or extract ventilation [E66] or Provide extract ventilation to material transfer points and other openings [E82]. (Efficiency: ≥ 90%) Or Wear a respirator conforming to EN140 with Type A/P2 filter or better [PPE29] (Protection Factor ≥ 10). <5%: Wear a disposable mask FFP1 (Assigned Protection Factor: 4) or better And avoid carrying out operation for more than 4 hours [OC12] Or Avoid carrying out operation
	for more than 1 hour [OC11]
	Professional worker 5-25%: Wear a respirator conforming to EN140 with Type A/P2 filter or better [PPE29]
	(Protection Factor ≥ 10) better And avoid carrying out operation for more than 4 hours
	[OC12].
	<5%: Wear a disposable mask FFP1 (Assigned Protection Factor: 4) or better And avoid carrying out operation for more than 4 hours [OC12] Or Avoid carrying out operation for more than 1 hour [OC11]
	Recommendation:
	Drain down and flush system prior to equipment break-in or maintenance [E55]. Clean equipment and the work area every day [C&H3]; Clear spills immediately [C&H13].
PROC13: Treatment of articles by dipping and pouring	Wear chemically resistant gloves (tested to EN374) in combination with specific activity training [PPE17]. Plus:
	5-25%: Avoid carrying out operation for more than 4 hour [OC12].
PROC14: General exposures (open systems) [CS16];	Wear suitable gloves tested to EN374 [PPE15]. Plus:
Production or preparation or articles by	Industrial worker
tabletting, compression, extrusion or pelletisation [CS100].	Industrial worker 5-25%: Provide extract ventilation to material transfer points and other openings [E82];
penensation [CO100].	Ensure material transfers are under containment or extract ventilation [E66].
	(Efficiency: ≥ 90%) Or Avoid carrying out operation for more than 4 hours [OC12]
	and Wear a disposable dust mask (FFP1, Assigned Protection Factor: 4) or better Or Avoid carrying out operation for more than 1 hour [OC11]
	Professional worker 5-25%: Wear a respirator conforming to EN140 with Type A/P2 filter or better [PPE29]
	5 2575. Trods a roopsidior contourning to E14176 with Type 7/1 2 little of better [1 1 223]

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	(Protection Factor ≥ 10) better And avoid carrying out operation for more than 4 hours
	[OC12].
	<5%: Wear a disposable mask FFP1 (Assigned Protection Factor: 4) or better And avoid
	carrying out operation for more than 4 hours [OC12] Or Avoid carrying out operation
	for more than 1 hour [OC11]
	Recommendation:
	Clear spills immediately [C&H13]; Clean equipment and the work area every day [C&H3].
PROC 19:	
Manual [CS34]; Mixing operations (open systems) [CS30].	Limit the substance content in the product to 5% [OC17] And Wear a respirator conforming to EN140 with Type A/P2 filter or better [PPE29] (Protection Factor ≥ 10). Wear chemically resistant gloves (tested to EN374) in combination with specific activity training [PPE17]. Plus:
	Industrial worker
	Avoid carrying out operation for more than 4 hours [OC12]
	Professional worker
	Avoid carrying out operation for more than 1 hour [OC11]
	Recommendation:
	Clear spills immediately [C&H13]. Clean equipment and the work area every day [C&H3].
Section 2.2	Control of environmental exposure
Product characteristics	Non-hydrophobic [PrC4b]. Readily biodegradable [PrC5a].
Frequency and duration of use	Continuous release. [FD2] Emission Days (days/year): 300 [FD4].
Other Operational Conditions of use	Product applied in aqueous process solution with negligible volatilization [OOC23].
affecting environmental exposure	Local freshwater dilution factor: 10 [EF1]. Local marine water dilution factor: 100 [EF2];
	Spent process fluid discharged to wastewater. [OOC19]
Technical onsite conditions and	Spent process fluid discharged to wastewater. [OOC19]
measures to reduce or limit	
discharges, air emissions and releases	
to soil	
Organization measures to prevent/limit	Not applicable
release from site	
Conditions and measures related to	Not applicable
municipal sewage treatment plant	
Conditions and measures related to	External treatment and disposal of waste should comply with applicable local and/or national
external treatment of waste for	regulations [ETW3]
disposal	
Conditions and measures related to	Not applicable
external recovery of waste	Net applicable
Other environmental control measures	Not applicable
additional to above	Expecure Estimation
Section 3	Exposure Estimation
3.1. Health	

Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the eSDS when the operational conditions/risk of management measures given in section 2 are implemented [G29]

3.2. Environment

Predicted exposures are not expected to exceed the applicable exposure limits when the

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	operational conditions/risk management measures given in section 2 are implemented [G29]
Section 4	Guidance to check compliance with the Exposure Scenario
4.1. Health	
The ECETOC TRA tool has	been used to estimate workplace exposures unless otherwise indicated [G21] version 2.0
4.2. Environment	EUSES 2.1 has been used to estimate environmental exposure [EE3] unless otherwise
	indicated.
Section 5	Additional good practice advice beyond the REACH Chemical Safety Assessment
Control of Worker Exposur	They are not subject to obligation laid down in Article 37 (4) of REACH.
Cleaning [CS47]	Clear spills immediately [C&H13]; Wear chemically resistant gloves (tested to EN374) in
	combination with specific activity training [PPE17] and Use suitable eye protection [PPE26]
Use of PPE	Skin protection:
	Gloves take attention to the breakthrough time of NaSCN. Train the employees how to put on
	and off the gloves, and how to use gloves in a proper way.
	Respiratory protection:
	Respirators: - Wear a disposable mask only once
	- Clean the non-disposable masks after every use and storage in a clean
	box and area. Preferable to wear respirators ≤ 2 hours a day.



ES6: Use in building and construction

Describtion of ES 6

Section 1	Exposure scenario Title
Title	Industrial and professional use of NaSCN formulations in building and construction
Use Descriptor	products (low dustiness) Sector of Use Industrial and Professional: SU3, SU22; SU19
Ose Descriptor	
	Process Categories: PROC5, PROC8a, PROC8b, PROC10, PROC14, PROC19; PROC24a
	Environmental Release Categories: EFCC spERC 5.1a.v1, 8c.1a.v1, 8f.1a.v1
Processes, tasks, activities covered	Covers the use of formulations in the building and construction, material transfers, application by rolling, brushing, wiping, tabletting, compression, cutting, drilling, equipment cleaning.
GES exposure criteria	Worker
	DNEL (inhalation): 3.00 mg/m ³
	DNEL (skin): 1.68 mg/kg bw/day
	Not classified as 1 or 2 Carcinogenic Mutagenic and/or Reproduction toxic
	Environmental PNECs (SCN- equivalent)
	PNEC aqua (freshwater): 0.095 mg/L
	PNEC aqua (marine water): 0.0095 mg/L
	PNEC aqua (intermittent release): 0.0272 mg/L
	PNEC sediment (freshwater): 0.543 mg/kg sediment dw
	PNEC sediment (marine water): 0.0543 mg/kg sediment dw
	PNEC soil: 6.336 mg/kg soil dw
	PNEC stp: 30 mg/L
	PNEC oral: 1.667 mg/kg food
	Not classified as Persistent Bio Accumulation and toxic, nor very Persistent and very Bio
	accumulating
Section 2	Operational conditions and risk management measures
Section 2.1	Control of worker exposure
Product characteristics	
Physical form of product	Solid, low dustiness [OC1];
	Solid, vapor pressure: <<0.01 Pa
	Aqueous solution, vapor pressure of substance << 0.01 Pa (completely dissociated)
	Exposure by aerosols
Concentration of substance in product	Covers percentage substance in the product up to 100 % (unless stated differently) [G13].
Amounts used	Varies between milliliters (sampling) and cubic meters (material transfers) [OC13].
Frequency and duration of use	Covers daily exposures up to 8 hours (unless stated differently) [G2]
Human factors not influenced by risk management	Not applicable



	Diogas y Froductos dulmicos
Other Operational Conditions affecting worker exposure	Assumes a good basic standard of occupational hygiene is implemented [G1]. Ensure operatives are trained to minimize exposures [EI119].
	Assumes use at not > 20°C above ambient [G15]; Assumes activities are at ambient temperature (unless stated differently) [G17]. Indoor [OC8].
Contributing Scenarios	Risk Management Measures
Due to eye irritating properties of the su	l bstance: Use suitable eye protection [PPE26].
Avoid skin contact	
PROC5:	
General exposures (open systems) [CS16].	Wear chemically resistant gloves (tested to EN374) in combination with specific activity training [PPE17].
Mixing operations (open systems)	Recommendation:
[CS30]. Batch process [CS55].	Use bulk or semi-bulk handling systems [E43]; Use drum pumps [E53]. Drain down and flush system prior to equipment break-in or maintenance [E55]. Clean equipment and the work area every day [C&H3].{Clear spills immediately [C&H13]
PROC8a:	
General exposures (open systems) [CS16]. Non-dedicated facility [CS82];	Wear chemically resistant gloves (tested to EN374) in combination with specific activity training [PPE17].
Material transfers [CS3];	Recommendation: Use bulk or semi-bulk handling systems [E43]; Use drum pumps [E53]; Drain down and flush system prior to equipment break-in or maintenance [E55]. Clean equipment and the work area every day [C&H3]. Clear spills immediately [C&H13].
PROC8b:	
General exposures (open systems) [CS16]; Dedicated facility [CS81].	> 5%: Wear chemically resistant gloves (tested to EN374) in combination with specific activity training [PPE17].
Matarial transfers [CC2]	Recommendation:
Material transfers [CS3];	Use bulk or semi-bulk handling systems [E43]; Use drum pumps [E53]. Drain down and flush system prior to equipment break-in or maintenance [E55]. Clean equipment and the work area every day [C&H3]. Clear spills immediately [C&H13].
PROC10 Rolling, Brushing [CS51]	
(open systems) [CS108]; Roller, spreader, flow application [CS98]; General exposures [CS1];	Limit the substance content in the product to 25% [OC18] and Wear chemically resistant gloves (tested to EN374) in combination with specific activity training [PPE17].
	Recommendation:
Equipment cleaning and maintenance [CS39].	Use long handled tools where possible [E50]; Clean equipment and the work area every day [C&H3]; Clear spills immediately [C&H13]; Avoid splashing [C&H15].
PROC14:	
Production or preparation or articles by tabletting, compression, extrusion	> 5%: Wear chemically resistant gloves tested to EN374 [PPE15].
or pelletisation [CS100]; General	Recommendation:



	Diogas y Froductos cultificos
exposures (open systems) [CS16].	Drain down and flush system prior to equipment break-in or maintenance [E55]. Clear spills immediately [C&H13]. Clean equipment and the work area every day [C&H3].
PROC 19:	
Manual [CS34];	Limit the substance content in the product to 5% [OC17] And
Mixing operations (open systems)	Wear chemically resistant gloves (tested to EN374) in combination with specific activity
[CS30].	training [PPE17].
	Recommendation:
	Stay upwind/keep distance from source [El22].
	Clear spills immediately [C&H13]. Clean equipment and the work area every day [C&H3].
PROC24a:	
	> 5%: Wear chemically resistant gloves (tested to EN374) in combination with 'basic'
e,g,:	employee training [PPE16].
Roller, spreader, flow application	Plus:
[CS98]; Drill floor operations	
[CS116];	Professional worker:
	> 25%: Avoid carrying out operation for more than 4 hours [OC12]
	Recommendation:
	Clean equipment and the work area every day [C&H3].
Section 2.2	Control of environmental exposure
Product characteristics	Non-hydrophobic [PrC4b]. Readily biodegradable [PrC5a].
Frequency and duration of use	Continuous release. [FD2] Emission Days (days/year): 220 (industrial use), 365 (service life)
01 0 1 10 111 ([FD4].
Other Operational Conditions of use	Product applied in aqueous process solution with negligible volatilization [OOC23].
affecting environmental exposure	Local freshwater dilution factor: 10 [EF1]. Local marine water dilution factor: 100 [EF2];
T 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Spent process fluid discharged to wastewater. [OOC19]
Technical onsite conditions and	Not applicable
measures to reduce or limit	
discharges, air emissions and releases to soil	
	Not applicable
Organization measures to prevent/limit release from site	Not applicable
Conditions and measures related to	Not applicable
municipal sewage treatment plant	τνοι αρριισασίο
Conditions and measures related to	External treatment and disposal of waste should comply with applicable local and/or national
external treatment of waste for	regulations [ETW3]
disposal	Tegulations [LTWo]
Conditions and measures related to	Not applicable
external recovery of waste	τνοι αρριισασίο
Other environmental control measures	Not applicable
additional to above	τοι αρριισασίο
Section 3	Exposure Estimation
3.1 Health	Exposure Estimation

3.1. Health

Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the eSDS when the operational conditions/risk of management measures given in section 2 are implemented [G29]



3.2. Environment	Predicted exposures are not expected to exceed the applicable exposure limits when the
	operational conditions/risk management measures given in section 2 are implemented [G29]
Section 4	Guidance to check compliance with the Exposure Scenario
4.1. Health	
The ECETOC TRA tool has b	peen used to estimate workplace exposures unless otherwise indicated [G21] version 2.0;
4.2. Environment	EUSES 2.1 has been used to estimate environmental exposure [EE3] unless otherwise
	indicated.
Section 5	Additional good practice advice beyond the REACH Chemical Safety Assessment
Note: The measures report	ed in this section have not been taken into account in the exposure estimates related to the
exposure scenario above.	Γhey are not subject to obligation laid down in Article 37 (4) of REACH.
Control of Worker Exposur	e e
Cleaning [CS47]	Clear spills immediately [C&H13]: Wear chemically resistant gloves (tested to EN374) in
	combination with specific activity training [PPE17] and Use suitable eye protection [PPE26]
Use of PPE	Skin protection:
	Gloves take attention to the breakthrough time of NaSCN. Train the employees putting on and
	off the gloves, and how to use gloves in a proper way.
	Respiratory protection:
	Respirators: - Wear a disposable mask only once
	- Clean the non-disposable masks after every use and storage in a clean box
	and area.
	Preferable to wear respirators ≤ 2 hours a day.
	Professible to come a principle of 0 hours or day.



ES7: Use in laboratory settings

Description of ES7

Section 1	Exposure scenario Title
Title	Professional laboratory use of NaSCN (low dustiness)
Use Descriptor	Sector of Use: SU22
	Process Categories: PROC10, PROC15.
	Environmental Release Categories: ERC8a
Processes, tasks, activities covered	Covers the use of the substance within laboratory settings, including material transfers and equipment cleaning.
GES exposure criteria	Worker
	DNEL (inhalation): 3.00 mg/m ³
	DNEL (skin): 1.68 mg/kg bw/day
	Not classified as 1 or 2 Carcinogenic Mutagenic and/or Reproduction toxic
	Environmental PNECs (SCN- equivalent)
	PNEC aqua (freshwater): 0.095 mg/L
	PNEC aqua (marine water): 0.0095 mg/L
	PNEC aqua (intermittent release): 0.0272 mg/L
	PNEC sediment (freshwater): 0.543 mg/kg sediment dw
	PNEC sediment (marine water): 0.0543 mg/kg sediment dw
	PNEC soil: 6.336 mg/kg soil dw
	PNEC stp: 30 mg/L
	PNEC oral: 1.667 mg/kg food
	Not classified as Persistent Bio Accumulation and toxic, nor very Persistent and very Bio
	accumulating
Section 2	Operational conditions and risk management measures
Section 2.1	Control of worker exposure
Product characteristics	Control of Hornes exposure
Physical form of product	Solid, low dustiness [OC1].
Thyologi form of product	Solid, vapor pressure: <<0.01 Pa
	Aqueous solution, vapor pressure of substance << 0.01 Pa (completely dissociated)
	riqueste solution, rupe processe of sussiance vivile in a (completely alcosolates)
	Exposure by aerosols
Concentration of substance in product	Covers percentage substance in the product up to 100 % (unless stated differently) [G13].
Amounts used	Not applicable
Frequency and duration of use	Covers daily exposures up to 8 hours (unless stated differently) [G2]
Human factors not influenced by risk management	Not applicable
Other Operational Conditions affecting	Assumes a good basic standard of occupational hygiene is implemented [G1]. Ensure
worker exposure	operatives are trained to minimize exposures [EI119].
	Assumes use at not > 20°C above ambient [G15];
	Assumes activities are at ambient temperature (unless stated differently) [G17].

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ES7: Use of solid Sodium thiocyanate	in professional laboratory settings (solid and in an aqueous solution) CAS: 540-72-7
	Indoor [OC8].
Contributing Scenarios	Risk Management Measures
Due to eye irritating properties of the sub Avoid skin contact.	 stance: Use suitable eye protection [PPE26].
PROC10	
General exposures [CS1]; Rolling, Brushing [CS51]; Wiping [CS50].	Limit the substance content in the product to 25% [OC18] and Wear chemically resistant gloves (tested to EN374) in combination with specific activity training [PPE17].
Equipment cleaning and maintenance	Recommendation:
[CS39].	Use long handled tools where possible [E50]; Clean equipment and the work area every day [C&H3]; Clear spills immediately [C&H13]; Avoid splashing [C&H15].
PROC15:	
Laboratory activities [CS36]; Small scale [CS61]. Manual [CS34].	No specific measures identified [EI18].
Section 2.2	Control of environmental exposure
Product characteristics	Non-hydrophobic [PrC4b]. Readily biodegradable [PrC5a].
Frequency and duration of use	Emission Days (days/year): 20 [FD4].
Other Operational Conditions of use affecting environmental exposure	Product applied in aqueous process solution with negligible volatilization [OOC23]. Local freshwater dilution factor: 10 [EF1]. Local marine water dilution factor: 100 [EF2]; Spent process fluid discharged to wastewater. [OOC19]
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	Not applicable
Organization measures to prevent/limit release from site	Not applicable
Conditions and measures related to municipal sewage treatment plant	Not applicable
Conditions and measures related to external treatment of waste for disposal	External treatment and disposal of waste should comply with applicable local and/or national regulations [ETW3]
Conditions and measures related to external recovery of waste	Not applicable
Other environmental control measures additional to above	Not applicable
Section 3	Exposure Estimation
3.1. Health	•
Predicted exposures are not expected to	exceed the applicable exposure limits (given in section 8 of the eSDS when the operational
conditions/risk of management measures	given in section 2 are implemented [G29]
3.2. Environment	Predicted exposures are not expected to exceed the applicable exposure limits when the operational conditions/risk management measures given in section 2 are implemented [G29]
Section 4	Guidance to check compliance with the Exposure Scenario
4.1. Health	
The ECETOC TRA tool has been used to	estimate workplace exposures unless otherwise indicated [G21] version 2.0;



nate in professional laboratory settings (solid and in an aqueous solution) CAS: 540-72-7									
EUSES 2.1 has been used to estimate environmental exposure [EE3] unless otherwise									
indicated.									
Additional good practice advice beyond the REACH Chemical Safety Assessment									
nis section have not been taken into account in the exposure estimates related to the									
e not subject to obligation laid down in Article 37 (4) of REACH.									
Clear spills immediately [C&H13]: Wear chemically resistant gloves (tested to EN374) in									
combination with specific activity training [PPE17] and Use suitable eye protection [PPE26]									
Skin protection:									
Gloves take attention to the breakthrough time of NaSCN. Train the employees putting on									
and off the gloves, and how to use gloves in a proper way.									
Respiratory protection:									
Respirators: - Wear a disposable mask only once									
- Clean the non-disposable masks after every use and storage in a clean box									
and area.									
Preferable to wear respirators ≤ 2 hours a day.									



Appendix 1. Human health/worker exposure estimation

1 The exposure limits of NaSCN.

Reference Values	Reference Values													
DNEL worker - inhalation (long term)	3.00	mg/m3												
DNEL worker - inhalation (short term)	15	mg/m3												
DNEL worker - dermal (long term)	1.68	mg/kg/day												

2 The operational conditions of uses of NaSCN

Default Operational Conditions	
frequency and duration of use	Covers daily exposures up to 8 hours (unless stated differently)
other Operational Conditions of use	Assumes use at not > 20°C above ambient
	Assumes a good basic standard of occupational hygiene is implemented
	Indoor
physical form of product	Solid (crystals) and in an aqueous solution: vapor pressure of NaSCN in water < 0.01
	Pa (dissociation is complete)
	E.g: Solid and Aqueous solution: vapor pressure of NaSCN <<0.01Pa; exposure by
	aerosols

3 Overview of the 7 Exposure Scenarios, including the process categories in accordance with the ECHA guidance R12 and the life cycle of use

	1	2	3	4	5	6	7	
Processes,	Manufacture	Formulation,	Use of NaSCN as	Covers the	Covers the	Covers the	Covers the	
tasks,	of NaSCN.	packing and	an intermediate or	use of	use in all	use of	use of the	
activities	Company	re-packing of	process chemical	formulated	kinds of	formulations	substance	
covered	specific – each	the substance	or extraction	spraying	applications	in the building	within	
	company	(including	agent. Includes	product	of non	and	laboratory	
	provides its	drums and	recycling/recovery,	including	spraying	construction,	settings,	
	own	small packs)	material transfers,	weighing,	formulations	material	including	
	information for	and his	storage,	transfer	including	transfers,	material	
	this section	mixtures in	maintenance and	operations	material	application by	transfers and	
		batch or	(un)loading	and	receipt,	rolling,	equipment	
		continuous	(including road car	automated	storage,	brushing,	cleaning,	
		operations,	and bulk	and manual	preparation	wiping,	maintenance	
		including	container),	spraying	and transfer,	tabletting,	and	
		storage,	sampling and	applications.	application by	compression,	laboratory	
		material	associated		roller and	cutting,	activities.	
		transfers,	laboratory		brush, wiping,	drilling,		
		mixing,	activities.		dip,	equipment		
		tabletting,			equipment	cleaning		
		compression,			cleaning,			
		pelletisation,			maintenance			
		extrusion,			and			
		large and			laboratory			
		small scale			activities.			
		packing,						
		sampling,						
		maintenance						

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						Drogad y Froductoo da	
		and					
		laboratory					
		activities.					
		Loading					
		(including					
		marine					
		vessel/barge,					
		rail/road car					
		and IBC					
		loading)					
		including its					
		distribution.					
Life Cycle	Company	Industrial (SU3,	Industrial (SU3,	Industrial (SU3)	Industrial (SU3)	Industrial	Professional
Stage /	specific – each	SU8,	SU8, SU9	and	and	(SU3),	(SU22)
Sector of	company	SU9 ,SU10)		Professional	Professional	Professional	
Use	provides its			(SU22)	(SU22)	(SU19, SU22)	
	own						
	information for						
	this section						
Applicable		PROC1,	PROC1, PROC2,	PROC1,	PROC1,	PROC5,	PROC10,
Use		PROC2,	PROC3, PROC4,	PROC2,	PROC2,	PROC8a,	PROC15
Descriptors		PROC3,	PROC8a, PROC8b,	PROC3,	PROC3,	PROC8b,	
(PROC or		PROC4,	PROC10, PROC15	PROC5,	PROC4,	PROC10,	
PC)		PROC5, PR		PROC7,	PROC5,	PROC14,	
		OC8a,		PROC8a,	PROC8a,	PROC19,	
		PROC8b,		PROC8b,	PROC8b,	PROC24	
		PROC9,		PROC10,	PROC10,		
		PROC10,		PROC11,	PROC13,		
		PROC14,		PROC19	PROC14,		
		PROC15.			PROC19		
		PROC19					

Issue date: 27-09-2013.

Safety Data Sheet According to Regulation (EC) No 1907/2006



sodium thiocyanate

Issue date: 27/09/2013 SDS Record Number: CSSS-TCO-010-113468

Revision date: 27/09/2013 Version 2.0

4 Overview of the general exposure assessment (ECETOC Tra model Version 2) by process category for substance NaSCN as a solid and in an aqueous solution (low dustiness; ≤100%)

ation	Use Inhalatory exposure Descriptor									Dermal exposure								Risk acteriz	ation	Risk Management Measures (RMMs)
Life Cycle Stage / Area of Application	Process Category	TRA Predicted Exposure (mg/m3) - no modifiers	TRA LEV : efficiency (%)	TRA concentration factor	TRA duration factor	TRA RPE factor	Extra exposure modifier: [optional]	Free text - comment to clarify additional modifier (inhalation)	Predicted Exposure -(mg/m3) - modified	TRA Predicted Dermal exposure (mg/kg/d) - no modifiers	TRA Dermal exposure LEV reduction	TRA concentration factor	PPE factor	extra exposure modifier: [optional]	Free text - comment to clarify additional modifier (dermal)	Predicted Dermal Exposure (mg/kg/d) -	RCR (inhalation)	RCR (dermal)	RCR (all routes)	RMMs for communication - Consolidate into GES or e-SDS REACH ADVISED: phrase [RMM code] Recommended: {phrase [RMM code].}
SU3; SU22	1 - Use in closed process, no likelihood of exposure	0.01							0.01	0.343						0.34	0.00	0.20	0.21	No specific measures identified [EI18]. {Ensure the system is closed}; {Clear transfer lines prior to de-coupling [E39]}.



SU3; SU22	2 - Use in closed process, no likelihood of exposure	0.01			0.01	1.371			1.3	7 0.00	0.82	0.82	No specific measures identified [EI18]. {Ensure the system is closed}; {Clear transfer lines prior to de-coupling [E39]}. {Clear spills immediately
													-
SU3; SU22	3 - Use in closed batch process (synthesis or	0.1			0.10	0.343			0.3	1 0.03	0.20	0.24	[C&H13]}. No specific measures identified [EI18].
	formulation)												{Ensure the system is closed}; {Drain down and flush system prior to equipment break-in or maintenance [E55]}. {Clear spills immediately [C&H13]}.
SU3	4 - Use in batch and other process (synthesis) where opportunity	0.5			0.50	6.857		gloves-basic training	0.6	0.17	0.41	0.57	Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training [PPE16].
	for exposure arises												{Use bulk or semi-bulk handling systems [E43]}; {Drain down and flush system prior



SU3		0.5	1-5%			0.10	6.857	1-5%	gloves-basic	0.69	0.03	0.82	0.85	to equipment break-in or maintenance [E55]}.{Clean equipment and the work area every day [C&H3]}; {Clear spills immediately [C&H13]}. Limit the substance content in the product to 5% [OC17]. {Use bulk or semi-bulk handling systems [E43]}; {Drain down and flush system prior to equipment break-in or maintenance [E55]}.{Clean equipment and the work area every day [C&H3]}; {Clear spills immediately [C&H13]}. Wear chemically
														[C&H13]}.
SU22	4 - Use in batch and other process (synthesis) where opportunity for exposure	1				1.00	6.857		gloves-basic training	0.69	0.33	0.41	0.74	Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training [PPE16].



												Drogad y r i		
	arises													semi-bulk handling
														systems [E43]};
														(Drain down and
														flush system prior
														to equipment
														break-in or
														maintenance
														[E55]}.{Clean
														equipment and the
														work area every
														day [C&H3]}. {Clear
														spills immediately
														[C&H13]}.
SU22	4 - Use in	1	1-5%			0.20	6.857	1-5%		1.37	0.07	0.82	0.88	Limit the substance
	batch and													content in the
	other													product to 5%
	process													[OC17].
	(synthesis)													
	where													{Use bulk or
	opportunity													semi-bulk handling
	for exposure													systems [E43]};
	arises													(Drain down and
														flush system prior
														to equipment
														break-in or
														maintenance
														[E55]}. {Clean
														equipment and the
														work area every
														day [C&H3]}. {Clear
														spills immediately
														[C&H13]}.

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										 _				
SU3	5 -Mixing or	0.5				0.50	13.714		gloves-specific	0.69	0.17	0.41	0.57	Wear chemically
	blending in								training					resistant gloves
	batch													(tested to EN374)
	processes													in combination with
	(multistage													specific activity
	and/or													training [PPE17].
	significant													31 1
	contact)													{Use bulk or
														semi-bulk handling
														systems [E43]};
														{Drain down and
														flush system prior
														to equipment break-in or
														maintenance
														[E55]}.{Clean
														equipment and the
														work area every
														day [C&H3]}. {Clear
														spills immediately
														[C&H13]}.
SU22	5 -Mixing or	1				1.00	13.714		gloves-specific	0.69	0.33	0.41	0.74	Wear chemically
	blending in								training					resistant gloves
	batch													(tested to EN374)
	processes													in combination with
	(multistage													specific activity
	and/or													training [PPE17].
	significant													
	contact)													{Use bulk or
														semi-bulk handling
														systems [E43]};
														Drain down and
														flush system prior
														to equipment
														break-in or
														maintenance
L	i .	1										l	<u> </u>	



														[E55]}. {Clean
														equipment and the
														work area every
														day [C&H3]}.{Clear
														spills immediately
														[C&H13]}.
SU3	7 -Industrial	1	5-25%	1-4		0.36	42.860	5-25%	Gloves-specific	1.29	0.12	0.77	0.89	Limit the substance
	spraying			hours					training					content in the
														product to 25%
														[OC18]. Wear
														chemically resistant
														gloves (tested to
														EN374) in
														combination with
														specific activity
														training [PPE17].
														(Clean equipment
														and the work area
														every day
														[C&H3]}.;
														{Clear spills
														immediately
														[C&H13]}.
SU3	7 -Industrial	1	1-5%			0.20	42.860	1-5%	Gloves-basic	0.86	0.07	0.51	0.58	Limit the substance
	spraying								training					content in the
														product to 5%
														[OC17]. Wear
														chemically resistant
														gloves (tested to
														EN374) in
														combination with
														'basic' employee
														training [PPE16].
														-
														(Clean equipment



													roductos Q	
														and the work area every day [C&H3]}.; {Clear spills immediately [C&H13]}.
SU3; SU22	8a -Transfer of chemicals from/to vessels/ large containers at non dedicated facilities	0.5				0.50	13.714		gloves-specific training	0.69	0.17	0.41	0.57	Wear chemically resistant gloves (tested to EN374) in combination with specific activity training [PPE17].; {Use bulk or semi-bulk handling systems [E43]}; {Drain down and flush system prior to equipment break-in or maintenance [E55]}. {Clean equipment and the work area every day [C&H3]}. {Clear spills immediately [C&H13]}.
SU3	8b -Transfer of chemicals from/to vessels/ large containers at dedicated facilities	0.1				0.10	6.857		gloves-basic training	0.69	0.03	0.41	0.44	Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training [PPE16].

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														semi-bulk handling
														systems [E43]};
														(Drain down and
														flush system prior
														to equipment
														break-in or
														maintenance
														[E55]}. {Clean
														equipment and the
														work area every
														day [C&H3]}. {Clear
														spills immediately
														[C&H13]}.
SU3	8b -Transfer	0.1	1-5%			0.02	6.857	1-5%		1.37	0.01	0.82	0.82	Limit the substance
	of chemicals													content in the
	from/to													product to 5%
	vessels/													[OC17].
	large													
	containers at													{Use bulk or
	dedicated													semi-bulk handling
	facilities													systems [E43]};
														(Drain down and
														flush system prior
														to equipment
														break-in or
														maintenance
														[E55]}. {Clean
														equipment and the
														work area every
														day [C&H3]}. {Clear
														spills immediately
														[C&H13]}.



	•	,	1					 						
SU22	8b -Transfer	0.5				0.50	6.857		gloves-basic	0.69	0.17	0.41	0.57	Wear chemically
	of chemicals								training					resistant gloves
	from/to													(tested to EN374)
	vessels/													in combination with
	large													'basic' employee
	containers at													training [PPE16].
	dedicated													
	facilities													{Use bulk or
														semi-bulk handling
														systems [E43]};
														Drain down and
														flush system prior
														to equipment
														break-in or
														maintenance
														[E55]}. {Clean
														equipment and the
														work area every
														day [C&H3]}.
														{Clear spills
														immediately
														[C&H13]}.
SU22	8b -Transfer	0.5	1-5%			0.10	6.857	1-5%		1.37	0.03	0.82	0.85	Limit the substance
0022	of chemicals	0.0	. 070			0.10	0.007	. 070		1.07	0.00	0.02	0.00	content in the
	from/to													product to 5%
	vessels/													[OC17].
	large													[0017].
	containers at													{Drain down and
	dedicated													flush system prior
	facilities													to equipment
	lacinties													break-in or
														maintenance
														[E55]}; {Use bulk or
														semi-bulk handling
														-
														systems [E43]}.
														{Clean equipment

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														oddolos Q	
															and the work area every day [C&H3]}; {Clear spills immediately [C&H13]}.
SU3	9 -Transfer of chemicals into small containers (dedicated filling line)	0.1				0.10	6.857		gloves-basic training		0.69	0.03	0.41	0.44	Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training [PPE16]. {Drain down and flush system prior to equipment break-in or maintenance [E55]}.{Clean equipment and the work area every day [C&H3]}; {Clear spills immediately [C&H13]}.
SU3	9 -Transfer of chemicals into small containers (dedicated filling line)	0.1	1-5%			0.02	6.857	1-5%		1	1.37	0.01	0.82	0.82	Limit the substance content in the product to 5% [OC17]. {Use bulk or semi-bulk handling systems [E43]}; {Drain down and flush system prior to equipment

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SU22	9 -Transfer of chemicals into small containers	0.5				0.50	6.857		gloves-basic training	0.69	0.17	0.41	0.57	break-in or maintenance [E55]}. {Clean equipment and the work area every day [C&H3]}. {Clear spills immediately [C&H13]}. Wear chemically resistant gloves (tested to EN374) in combination with
	(dedicated filling line)													'basic' employee training [PPE16]. {Drain down and flush system prior to equipment break-in or maintenance [E55]}. {Clean equipment and the work area every day [C&H3]}. {Clear spills immediately [C&H13]}.
SU22	9 -Transfer of chemicals into small containers (dedicated filling line)	0.5	1-5%			0.10	6.857	1-5%		1.37	0.03	0.82	0.85	Limit the substance content in the product to 5% [OC17]. {Drain down and flush system prior to equipment break-in or



			,					 		 		 				
																maintenance
																[E55]}. {Clean
																equipment and the
																work area every
																day [C&H3]}. {Clear
																spills immediately
																[C&H13]}.
S3	10 - Roller	0.5		5-25%				0.30	27.4286	5-25%	gloves-specific	0.82	0.10	0.49	0.59	Limit the substance
S22	application or										training					content in the
	brushing															product to 25%
																[OC18].Wear
																chemically resistant
																gloves (tested to
																EN374) in
																combination with
																specific activity
																training [PPE17].
																{Use long handled
																tools where
																possible [E50]}.
																(Clean equipment
																and the work area
																every day [C&H3]};
																{Clear spills
																immediately
																[C&H13]}.;
																{Avoid splashing
																[C&H15]}.
S3	10 - Roller	0.5		1-5%				0.10	27.4286	1-5%	gloves	1.10	0.03	0.65	0.69	Limit the substance
S22	application or															content in the
	brushing															product to 5%
																OC17].Wear
																suitable gloves
																tested to EN374
	1	1	1	·	·	l	ı				l		l	L	L	



														[PPE15].
														{Use long handled tools where possible [E50]}. {Clean equipment and the work area every day [C&H3]}; {Clear spills immediately [C&H13]}.; {Avoid splashing [C&H15]}
SU22	11 - Non industrial spraying	1	5-25%	1-4 hours		0.36	107.140	5-25%	gloves-intensive controls	1.29	0.12	0.77	0.89	Limit the substance content in the product to 25% [OC18]. Avoid carrying out operation for more than 4 hours [OC12] Wear chemically resistant gloves (tested to EN374) in combination with intensive management supervision controls [PPE18]. {Clean equipment and the work area every day [C&H3]}.; {Clear spills immediately



	1			1					-							
																[C&H13]}.
SU22	11 - Non	1	1-5%				0.20	107.140		1-5%	Gloves- specific	1.07	0.07	0.64	0.70	Limit the substance
	industrial										training					content in the
	spraying															product to 5%
																[OC17]. Wear
																chemically resistant
																gloves (tested to
																EN374) in
																combination with
																specific activity
																training [PPE17].
																(Class assissment
																{Clean equipment and the work area
																every day [C&H3]}.;
																{Clear spills
																immediately
																[C&H13]}.
SU3	13	0.1					0.10	13.714			Gloves- specific	0.69	0.03	0.41	0.44	Wear chemically
000	-Treatment of	0.1					0.10	15.714			training	0.03	0.00	0.41	0.44	resistant gloves
	articles by										training					(tested to EN374)
	dipping and															in combination with
	pouring															specific activity
	podinig															training [PPE17].
																(Clean equipment
																and the work area
																every day
																[C&H3]}.;
																{Clear spills
																immediately
																[C&H13]}.
SU2	13	0.5					0.50	13.714			Gloves- specific	0.69	0.17	0.41	0.57	Wear chemically
	-Treatment of										training					resistant gloves
	articles by															(tested to EN374)
					1								1	1	1	(======================================



	dipping and pouring													in combination with specific activity training [PPE17].
														{Clean equipment and the work area every day [C&H3]}.; {Clear spills immediately [C&H13]}.
SU3	14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation	0.1				0.10	3.429		gloves	0.69	0.03	0.41	0.44	Wear suitable gloves tested to EN374 [PPE15]. {Drain down and flush system prior to equipment break-in or maintenance [E55]}. {Clean equipment and the work area every day [C&H3]}. {Clear spills immediately [C&H13]}.
SU3	14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation	0.1	1-5%			0.02	3.429	1-5%		0.69	0.01	0.41	0.41	Limit the substance content in the product to 5% [OC17]. {Drain down and flush system prior to equipment break-in or maintenance



														[E55]}. {Clean equipment and the
														work area every
														day [C&H3]}. {Clear
														spills immediately
														[C&H13]}.
SU22	14 -	1				1.00	3.429		gloves	0.69	0.33	0.41	0.74	Wear suitable
	Production of													gloves tested to
	preparations													EN374 [PPE15].
	or articles by													
	tabletting,													{Drain down and
	compression,													flush system prior
	extrusion,													to equipment
	pelletisation													break-in or
														maintenance
														[E55]}.{Clean
														equipment and the
														work area every
														day [C&H3]}; {Clear
														spills immediately
														[C&H13]}.
SU22		1	1-5%			0.20	3.429	1-5%		0.69	0.07	0.41	0.47	Limit the substance
	Production of													content in the
	preparations													product to 5%
	or articles by													[OC17].
	tabletting,													
	compression,													{Drain down and
	extrusion,													flush system prior
	pelletisation													to equipment
														break-in or
														maintenance
														[E55]}. {Clean
														equipment and the
														work area every
														day [C&H3]}; {Clear
														spills immediately



														[C&H13]}.
SU3; SU22	15 - Use of laboratory reagents in small scale laboratories	0.1				0.10	0.343			0.34	0.03	0.20	0.24	No specific measures identified [EI18].
SU3; SU22	19 - Hand-mixing with intimate contact (only PPE available	0.5	1-5%			0.10	141.43	1-5%	gloves-specific training	1.41	0.03	0.84	0.88	Limit the substance content in the product to 5% [OC17]. Wear chemically resistant gloves (tested to EN374) in combination with specific activity training [PPE17]. {Clean equipment and the work area every day [C&H3]}. {Clear spills immediately [C&H13]}; {Stay upwind/keep distance from source [El22]}.
SU3	24a - High (mechanical) energy work-up of substances bound in materials and/or articles - pt <mp -="" low<="" td=""><td>1</td><td></td><td></td><td></td><td>1.00</td><td>2.829</td><td></td><td>gloves</td><td>0.57</td><td>0.33</td><td>0.34</td><td>0.67</td><td>Wear suitable gloves tested to EN374 [PPE15]. {Clean equipment and the work area every day [C&H3]}.</td></mp>	1				1.00	2.829		gloves	0.57	0.33	0.34	0.67	Wear suitable gloves tested to EN374 [PPE15]. {Clean equipment and the work area every day [C&H3]}.

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	1					 									
	Fugacity														
SU3	24a - High	1	1-5%			0.20	2.829	1-5%			0.57	0.07	0.34	0.40	Limit the substance
	(mechanical)														content in the
	energy														product to 5%
	work-up of														[OC17];
	substances														
	bound in														{Clean equipment
	materials														and the work area
	and/or														every day [C&H3]}.
	articles -														
	pt <mp -="" low<="" td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></mp>														
CLIOO	Fugacity	_		1-4		1.00	0.000		alavias basis		0.00	0.00	0.17	0.77	Avaid samping ave
SU22	24a - High	3				1.80	2.829		gloves-basic		0.28	0.60	0.17	0.77	Avoid carrying out
	(mechanical)			hours					training						operation for more than 4 hours
	energy work-up of														[OC12]; Wear
	substances														chemically resistant
	bound in														gloves (tested to
	materials														EN374) in
	and/or														combination with
	articles -														'basic' employee
	pt <mp -="" low<="" td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>training [PPE16].</td></mp>														training [PPE16].
	Fugacity														· · · · · · · · · · · · · · · · · · ·
	3,														(Clean equipment
															and the work area
															every day [C&H3]}.

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													Drogas y P	roductos Q	uimicos
SU22	24a - High	3	5-25%			1.80	2.829	5-25%	gloves-basic		0.17	0.60	0.10	0.70	Limit the substance
	(mechanical)								training						content in the
	energy														product to 25%
	work-up of														[OC18]; Wear
	substances														chemically resistant
	bound in														gloves (tested to
	materials														EN374) in
	and/or														combination with
	articles -														'basic' employee
	pt <mp -="" low<="" td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>training [PPE16].</td></mp>														training [PPE16].
	Fugacity														
															(Clean equipment
															and the work area
															every day [C&H3]}.
SU22		3	1-5%			0.60	2.829	1-5%			0.57	0.20	0.34	0.54	Limit the substance
	(mechanical)														content in the
	energy														product to 5%
	work-up of														[OC17];
	substances														(0)
	bound in														{Clean equipment
	materials														and the work area
	and/or														every day [C&H3]}.
	articles -														
	pt <mp -="" low<="" td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></mp>														
í	Fugacity			1	- 1										



5 Overview of the general exposure assessment (EcetocECETOC Tra model) by process category for substance NaSCN as a solid formulation (medium dustiness; ≥ 25%)

ion	Use Descriptor			In	nhalato	ry exp	osure					Dern	nal exposu	ıre			Risk	Charact	erization	Risk Management Measures (RMMs
Life Cycle Stage / Area of Application	Process Categor y	TRA Predicted Exposure - (mg/m3) - no modifiers	TRA LEV : efficiency (%)	TRA concentration factor	TRA duration factor	TRA RPE factor	Extra exposure modifier: [optional]	Free text - comment to clarify additional modifier (inhalation)	Predicted Exposure - (mg/m3) - modified	TRA Predicted Dermal exposure (mg/kg/d) - no modifiers	TRA Dermal exposure LEV reduction factor	TRA concentration factor	PPE factor	extra exposure modifier: [optional]	Free text - comment to clarify additional modifier (dermal)	Predicted Dermal Exposure (mg/kg/d) - modified	RCR (inhalation)	RCR (dermal)	RCR (all routes)	RMMs for communication - Consolidate into GES or e-SDS REACH ADVISED: phrase [RMM code] Recommended: {phrase [RMM code].}
SU3; SU22	1 - Use in closed process, no	0.01							0.01	0.343						0.34	0.00	0.20	0.21	No specific measures identified [EI18].
	likelihood of exposure																			{Ensure the system is closed} {Clear transfer lines prior to de-coupling [E39]}.
SU3	2 - Use in closed process, no	0.5							0.50	1.371			gloves			0.27	0.17	0.16	0.33	Wear suitable gloves tested to EN374 [PPE15].
	likelihood of																			{Ensure the system is

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					-								3337		
	exposure														closed}; {Clear transfer lines prior to de-coupling [E39]}. {Clear spills immediately [C&H13]}.
SU3	2 - Use in closed process, no likelihood of exposure	0.5	5-25%			0.30	1.371	5-25%			0.82	0.10	0.49	0.59	Limit the substance content in the product to 25% [OC18]. {Ensure the system is closed}; {Clear transfer lines prior to de-coupling [E39]}. {Clear spills immediately [C&H13]}.
SU22	2 - Use in closed process, no likelihood of exposure	1				1.00	1.371		gloves		0.27	0.33	0.16	0.50	Wear suitable gloves tested to EN374 [PPE15]. {Ensure the system is closed} {Clear transfer lines prior to de-coupling [E39]}. {Clear spills immediately

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																[C&H13]}.
SU22	2 - Use in closed process, no likelihood of	1		5-25%			0.60	1.371	5-25%			0.82	0.20	0.49	0.69	Limit the substance content in the product to 25% [OC18].
	exposure															{Ensure the system is closed}; {Clear transfer lines prior to de-coupling [E39]}. {Clear spills immediately [C&H13]}.
SU3; SU22	3 - Use in closed batch process	1					1.00	0.343				0.34	0.33	0.20	0.54	No specific measures identified [EI18].
	(synthesis or formulation)															{Ensure the system is closed}; {Drain down and flush system prior to equipment break-in or maintenance [E55]}.{Clear spills immediately [C&H13]}.
SU3; SU22	4 - Use in batch and other	5	80				1.00	6.857		gloves-bas ic training		0.69	0.33	0.41	0.74	Ensure material transfers are under



process								containm	nent or
(synthesis)								extract	
where								ventilatio	on [E66] ;
opportunity								Provide	extract
for								ventilatio	n to
exposure								material	transfer
arises								points ar	nd other
								openings	3
								[E82].We	
								chemica	
								resistant	
								(tested to)
								EN374) i	in
								combina	
								'basic' er	nployee
								training [PPE16].
								{Use bul	k or
								semi-bul	k
								handling	
								systems	[E43]};
								{Drain do	own and
								flush sys	tem
								prior to	
								equipme	nt
								break-in	or
								maintena	ance
								[E55]}. {(Clean
								equipme	nt and
								the work	area
								every da	y
								[C&H3]};	{Clear
								spills	
								immedia	tely
								[C&H13]	} .



													,	Toddotos Quil	
SU3;	4 - Use in	5	5-25%	1-4		1.80	6.857	5-25%	gloves-bas		0.41	0.60	0.24	0.84	Limit the
SU22	batch and			hours					ic						substance
	other								training						content in the
	process								· ·						product to 25%
	(synthesis)														[OC18]. Avoid
	where														carrying out
	opportunity														operation for
	for														more than 4
	exposure														hours [OC12];
	arises														Wear chemically
															resistant gloves
															(tested to
															EN374) in
															combination with
															'basic' employee
															training [PPE16].
															{Use bulk or
															semi-bulk
															handling
															systems [E43]};
															{Discharge sacks
															via suitable
															vented charge
															chute [E44]};
															{Drain down and
															flush system
															prior to
															equipment
															break-in or
															maintenance
															[E55]}. {Clean
															equipment and
															the work area
															every day
															[C&H3]}; {Clear



														Toddetos Quil	
															spills immediately [C&H13]}.
SU3; SU22	batch and	5	1-5%			1.00	6.857	1-5%	gloves		0.27	0.33	0.16	0.50	Limit the substance content in the product to 5% [OC17]; Wear suitable gloves tested to EN374 [PPE15]. {Use bulk or semi-bulk handling systems [E43]}; {Discharge sacks via suitable vented charge chute [E44]}; {Drain down and flush system prior to equipment break-in or maintenance [E55]}. {Clean equipment and the work area every day [C&H3]}. {Clear
															spills immediately [C&H13]}.

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SU3;	5 -Mixing	5	80				1.00	13.714	gloves-spe)	0.69	0.33	0.41	0.74	Ensure material
	or blending								cific						transfers are
SU22	in batch								training						under
	processes														containment or
	(multistage														extract
	and/or														ventilation [E66];
	significant														Provide extract
	contact)														ventilation to
	Í														material transfer
															points and other
															openings [E82].
															Wear chemically
															resistant gloves
															(tested to
															EN374) in
															combination with
															specific activity
															training [PPE17].
															{Use bulk or
															semi-bulk
															handling
															systems [E43]};
															Drain down and
															flush system
															prior to
															equipment
															break-in or
															maintenance
															[E55]}. {Clean
															equipment and
															the work area
															every day
															[C&H3]};
															{Clear spills
															immediately
		1	1	l	l	l						l l			



														i roddotos dali	
															[C&H13]}.
SU3; SU22	or blending	5	5-25%	hours		1.80	13.714	5-25%	gloves-spe cific training		0.41	0.60	0.24	0.84	Limit the substance content in the product to 25% [OC18]. Avoid carrying out operation for more than 4 hours [OC12]; Wear chemically resistant gloves (tested to EN374) in combination with specific activity training [PPE17]. {Use bulk or semi-bulk handling systems [E43]}; {Discharge sacks via suitable vented charge chute [E44]}; {Drain down and flush system prior to equipment break-in or maintenance [E55].{Clean equipment and the work area



															every day [C&H3]]; {Clear spills immediately [C&H13]}.
SU3; SU22	or blending	5	1-5%			1.00	13.714	1-5%	gloves		0.55	0.33	0.33	0.66	[C&H13]}. Limit the substance content in the product to 5% [OC17]; Wear suitable gloves tested to EN374 [PPE15]. {Use bulk or semi-bulk handling systems [E43]}; {Discharge sacks via suitable vented charge chute [E44]}; {Drain down and flush system prior to equipment break-in or maintenance [E55]}.{Clean equipment and the work area every day [C&H3]}; Clear
															spills immediately [C&H13]}.



	T	1	1	1	ı	1			T	г г					
SU3;		5	80				1.00	13.714	gloves-spe		0.69	0.33	0.41	0.74	Ensure material
	-Transfer of								cific						transfers are
SU22	chemicals								training						under
	from/to														containment or
	vessels/														extract
	large														ventilation [E66];
	containers														Provide extract
	at non														ventilation to
	dedicated														material transfer
	facilities														points and other
															openings [E82];.
															Wear chemically
															resistant gloves
															(tested to
															EN374) in
															combination with
															specific activity
															training [PPE17];
															, , , , , , , , , , , , , , , , , , ,
															{Use bulk or
															semi-bulk
															handling
															systems [E43]};
															Drain down and
															flush system
															prior to
															equipment
															break-in or
															maintenance
															[E55]}; {Clean
															equipment and
															the work area
															every day
															[C&H3]}; {Clear
															spills
															immediately
L					l										odiatory



													•		
															[C&H13]}.
SU3; SU22	8a -Transfer of chemicals from/to vessels/ large containers at non dedicated facilities	5	5-25%	1-4 hours		1.80	13.714	5-25%	gloves-spe cific training		0.41	0.60	0.24	0.84	Limit the substance content in the product to 25% [OC18]. Avoid carrying out operation for more than 4 hours [OC12]; Wear chemically resistant gloves (tested to EN374) in combination with specific activity training [PPE17]. {Use bulk or semi-bulk handling systems [E43]}; {Discharge sacks via suitable vented charge
															{Discharge sacks via suitable vented charge chute [E44]}; {Drain down and flush system
															prior to equipment break-in or maintenance [E55]}; {Clean equipment and the work area every day



	1										,	 				
																[C&H3]}; {Clear spills
																immediately
																[C&H13]}.
SU3;	8a	5		1-5%			1.00	13.714	1-5%	gloves		0.55	0.33	0.33	0.66	Limit the
	-Transfer of															substance
SU22	chemicals															content in the
	from/to															product to 5%
	vessels/															[OC17]; Wear
	large															suitable gloves
	containers															tested to EN374
	at non															[PPE15].
	dedicated															
	facilities															{Use bulk or
																semi-bulk
																handling
																systems [E43]};
																{Discharge sacks
																via suitable
																vented charge
																chute [E44]};
																Drain down and
																flush system
																prior to
																equipment
																break-in or
																maintenance
																[E55]}.{Clean
																equipment and
																the work area
																every day
																[C&H3]}; Clear
																spills
																immediately
																[C&H13]}.
SU3;	8b	5	80				1.00	6.857		gloves-bas		0.69	0.33	0.41	0.74	Ensure material

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										Drogas y r i	
	-Transfer of						ic training				transfers are
SU22	chemicals										under
	from/to										containment or
	vessels/										extract
	large										ventilation [E66];
	containers										Provide extract
	at										ventilation to
	dedicated										material transfer
	facilities										points and other
											openings [E82].
											Wear chemically
											resistant gloves
											(tested to
											EN374) in
											combination with
											'basic' employee
											training [PPE16].
											{Use bulk or
											semi-bulk
											handling
											systems [E43]};
											Drain down and
											flush system
											prior to
											equipment
											break-in or
											maintenance
											[E55]}; {Clean
											equipment and
											the work area
											every day
											[C&H3]}; {Clear
											spills
											immediately
											[C&H13]}.



SU3; 8b 5 5 5-25% 1-4 hours 1.80 6.857 5-25% gloves-bas ic training 0.41 0.60 0.24	0.84 Limit the substance
	cubetance
	Substance
SU22 chemicals	content in the
from/to	product to 25%
vessels/	[OC18]. Avoid
large large	carrying out
containers	operation for
at	more than 4
dedicated	hours [OC12;];
facilities	Wear chemically
	resistant gloves
	(tested to
	EN374) in
	combination with
	'basic' employee
	training [PPE16]
	{Use bulk or
	semi-bulk
	handling
	systems [E43]};
	{Discharge sack
	via suitable
	vented charge
	chute [E44]};
	{Drain down and
	flush system
	prior to
	equipment
	break-in or
	maintenance
	[E55]}; {Clean
	equipment and
	the work area
	every day
	[C&H3]}; {Clear



SU3; 8b 5 1-5% 1.00 6.857 1-5% gloves 0.27 0 SU22 chemicals	0.33 0.16	spills immediately [C&H13]}. 0.50 Limit the substance
-Transfer of	0.33 0.16	
from/to vessels/ large containers at dedicated facilities		content in the product to 5% [OC17]; Wear suitable gloves tested to EN374 [PPE15]. {Use bulk or semi-bulk handling systems [E43]}; {Discharge sacks via suitable vented charge chute [E44]}; {Drain down and flush system prior to equipment break-in or maintenance [E55]}. {Clean equipment and the work area every day [C&H3]}. {Clear spills immediately [C&H13]}.



														roddolos Quii	
SU3;	9 -Transfer	5	80			1.00	6.857		gloves-bas		0.69	0.33	0.41	0.74	Ensure material
	of								ic training						transfers are
SU22	chemicals														under
	into small														containment or
	containers														extract
	(dedicated														ventilation [E66];
	filling line)														Provide extract
	g														ventilation to
															material transfer
															points and other
															openings [E82];
															Wear chemically
															resistant gloves
															(tested to
															EN374) in
															· ·
															combination with
															'basic' employee
															training [PPE16].
															{Use bulk or
															semi-bulk
															handling
															systems [E43]};
															{Drain down and
															flush system
															prior to
															equipment
															break-in or
															maintenance
															[E55]}; {Clean
															equipment and
															the work area
															every day
															[C&H3]}; {Clear
															spills
															immediately



														i roddotos dali	
															[C&H13]}.
SU3	9 -Transfer	5	5-25%	1-4		1.80	6.857	5-25%	gloves-bas		0.41	0.60	0.24	0.84	Limit the
SU22	of			hours					ic training						substance
	chemicals														content in the
	into small														product to 25%
	containers														[OC18]. Avoid
	(dedicated														carrying out
	filling line)														operation for
															more than 4
															hours [OC12];
															Wear chemically
															resistant gloves
															(tested to EN374) in
															combination with
															'basic' employee
															training [PPE16].
															01
															{Use bulk or
															semi-bulk
															handling
															systems [E43]};
															{Discharge sacks
															via suitable
															vented charge
															chute [E44]};
															{Drain down and
															flush system



													3.57		
															prior to equipment break-in or maintenance [E55]}. {Clean equipment and the work area every day [C&H3]}; {Clear spills immediately [C&H13]}.
SU3 SU22	9 -Transfer of chemicals into small containers (dedicated filling line)	5	1-5%			1.00	6.857	1-5%	gloves		0.27	0.33	0.16	0.50	Limit the substance content in the product to 5% [OC17]; Wear suitable gloves tested to EN374 [PPE15]. {Use bulk or semi-bulk handling systems [E43]}; {Discharge sacks via suitable vented charge
															chute [E44]); {Drain down and flush system prior to equipment break-in or maintenance [E55]}. {Clean



															equipment and the work area every day [C&H3]}. {Clear spills immediately [C&H13]}.
SU3	PROC13: General exposures (open systems) [CS16]; Dipping, immersion and pouring [CS4].	1				1.00	13.714		Gloves- specific training		0.69	0.33	0.41	0.74	Wear chemical resistant gloves (tested to EN374) in combination with specific activity training [PPE17] {Clean equipment and the work area every day [C&H3]]; {Clear spills immediately
SU22	13. General exposures (open systems) [CS16]; Dipping, immersion and pouring [CS4].	5	80			1.00	13.714		gloves-spe cific training		0.69	0.33	0.41	0.74	[C&H13]}. Ensure material transfers are under containment or extract ventilation [E66]; Provide extract ventilation to material transfer points and other openings [E82]. Wear chemically resistant gloves



			ı				1	1				1	ı					
																		(tested to EN374) in
																		combination with
																		specific activity
																		training [PPE17].
																		{Use bulk or
																		semi-bulk
																		handling
																		systems [E43]};
																		{Drain down and
																		flush system
																		prior to
																		equipment
																		break-in or
																		maintenance
																		[E55]}. {Clean
																		equipment and
																		the work area
																		every day
																		[C&H3]};
																		{Clear spills
																		immediately
																		[C&H13]}.
SU22	13.:	5	į	5-25%	1-4			1.80	13.714		5-25%	gloves-spe		0.41	0.60	0.24	0.84	Limit the
	General				hours							cific						substance
	exposures											training						content in the
	(open																	product to 25%
	systems)																	[OC18]. Avoid
	[CS16];																	carrying out
	Dipping,																	operation for
	immersion																	more than 4
	and																	hours [OC12];
	pouring																	Wear chemically
	[CS4].																	resistant gloves
	[00+].																	(tested to
]]								(เฮอเฮน เป



																		EN074) in
																		EN374) in
																		combination with
																		specific activity
																		training [PPE17].
																		{Use bulk or
																		semi-bulk
																		handling
																		systems [E43]};
																		{Discharge sacks
																		via suitable
																		vented charge
																		chute [E44]};
																		Drain down and
																		flush system
																		prior to
																		equipment
																		break-in or
																		maintenance
																		[E55]}.{Clean
																		equipment and
																		the work area
																		every day
																		[C&H3]}; {Clear
																		spills
																		immediately
																		[C&H13]}.
SU22		5		1-5%				1.00	13.714		1-5%	gloves		0.55	0.33	0.33	0.66	Limit the
	General																	substance
	exposures																	content in the
	(open																	product to 5%
	systems)																	[OC17]; Wear
	[CS16];																	suitable gloves
	Dipping,																	tested to EN374
	immersion																	[PPE15].
	and																	
	I.		l		l	 1	1			l			1					



			 	 ,	1					 					
	pouring														{Use bulk or
	[CS4].														semi-bulk
															handling
															systems [E43]};
															{Discharge sacks
															via suitable
															vented charge
															chute [E44]};
															{Drain down and
															flush system
															prior to
															equipment
															break-in or
															maintenance
															[E55]}.{Clean
															equipment and
															the work area
															every day
															[C&H3]}; Clear
															spills
															immediately
															[C&H13]}.
SU3	14 -	1				1.00	3.429		gloves		0.69	0.33	0.41	0.74	Wear suitable
	Production														gloves tested to
	of														EN374 [PPE15].
	preparation														
	s or articles														{Clean
	by														equipment and
	tabletting,														the work area
	compressi														every day
	on,														[C&H3]}; {Clear
	extrusion,														spills
	pelletisatio														immediately
	n														[C&H13]}.
<u> </u>				<u> </u>	1	l			l						r 1),



															Toddotos Quii	
SU3	14 - Production of preparation s or articles by tabletting, compressi on, extrusion, pelletisatio n	1	1-5%				0.20	3.429	1-5%			0.69	0.07	0.41	0.47	Limit the substance content in the product to 5% [OC17]. {Clean equipment and the work area every day [C&H3]}; {Clear spills immediately
SU22	14 - Production of preparation s or articles by tabletting, compressi on, extrusion, pelletisatio	5			0.25	FFP1 (APF=4)	1.25	3.429		gloves		0.69	0.42	0.41	0.82	[C&H13]}. Wear suitable gloves tested to EN374 [PPE15]. Wear a disposable dust mask FFP1 (APF=4) or better {Clean equipment and
	n															the work area every day [C&H3]]; {Clear spills immediately [C&H13]]. {Avoid carrying out operation for more than 4 hours [OC12]}.
SU22	14 -	5	5-25%	1-4			1.80	3.429	5-25%	gloves		0.41	0.60	0.24	0.84	Limit the

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													0 /		
	Production			hours											substance
	of														content in the
	preparation														product to 25%
	s or articles														[OC18]. Avoid
	by														carrying out
	tabletting,														operation for
	compressi														more than 4
	on,														hours [OC12];
	extrusion,														Wear suitable
	pelletisatio														gloves tested to
	n														EN374 [PPE15 ;
															_
															{Clean
															equipment and
															the work area
															every day
															[C&H3]}; {Clear
															spills
															immediately
															[C&H13]}.
SU22	14 -	5	1-5%				1.00	3.429	1-5%		0.69	0.33	0.41	0.74	Limit the
	Production														substance
	of														content in the
	preparation														product to 5%
	s or articles														[OC17].
	by														
	tabletting,														{Clean
	compressi														equipment and
	on,														the work area
	extrusion,														every day
	pelletisatio														[C&H3]} ;
	n														{Clear spills
															immediately
															[C&H13]}.
L	l l			1	 1	<u> </u>	1								<u> </u>



														roddolos Quiri	
SU3; SU22	small scale laboratorie s	0.5				0.50	0.343				0.34	0.17	0.20	0.37	No specific measures identified [EI18].
SU3; SU22	19 - Hand-mixin g with intimate contact (only PPE available	5	1-5%	15 min-1 hour		0.20	141.43	1-5%	gloves-spe cific training		1.41	0.07	0.84	0.91	Limit the substance content in the product to 5% [OC17]. Avoid carrying out operation for more than 1 hour [OC11]; Wear chemically resistant gloves (tested to EN374) in combination with specific activity training [PPE17]. {Clean equipment and the work area every day [C&H3]}; {Clear spills immediately [C&H13]}; {Stay upwind/keep distance from source [EI22]}.



6 Overview of the general exposure assessment (EcetocECETOC Tra model) by process category for substance NaSCN as a solid formulation (high dustiness; ≤ 25%).

pplication	Use Descriptor			ı	nhalator	y expos	sure				Derma	ıl exposure		Char	Risk acteriz	ation	Risk Management Measures (RMMs)
Life Cycle Stage / Area of Application	Process Category	TRA Predicted Exposure -(mg/m3) -no modifiers	TRA LEV : efficiency (%)	TRA concentration factor	TRA duration factor	TRA RPE factor	Extra exposure modifier: [optional]	Free text - comment to clarify additional modifier (inhalation)	Predicted Exposure - (mg/m3) - modified	TRA Predicted Dermal exposure (mg/kg/d) - no modifiers	TRA concentration factor	PPE factor	Predicted Dermal Exposure	٦a	RCR (dermal)	RCR (all routes)	RMMs for communication - Consolidate into GES or e-SDS REACH ADVISED: phrase [RMM code] Recommended: {phrase [RMM code].}
SU3	1 - Use in closed process, no likelihood of exposure	0.01							0.01	0.343			0.34	0.00	0.20	0.21	No specific measures identified [EI18]. {Ensure the system is closed} {Drain down and flush system prior to equipment break-in or maintenance [E55]}.
SU22	1 - Use in closed process, no likelihood of exposure	0.1							0.10	0.343			0.34	0.03	0.20	0.24	No specific measures identified [EI18]. {Ensure the system is closed} {Drain down and flush system prior to equipment break-in or maintenance [E55]}.
SU3	2 - Use in closed process, no likelihood of exposure	1							1.00	1.371		gloves	0.27	0.33	0.16	0.50	Wear suitable gloves tested to EN374 [PPE15]. {Handle substance within a closed system [E47]}. {Drain

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														down and flush system prior
														to equipment break-in or
														maintenance [E55]}.; {Clear
														spills immediately [C&H13]}.
SU3	2 - Use in	1	5-25%			0.60	1.371	5-25%		0.82	0.20	0.49	0.69	Limit the substance content
	closed													in the product to 25%
	process, no													[OC18].
	likelihood of													
	exposure													{Handle substance within a
														closed system [E47]}. {Drain
														down and flush system prior
														to equipment break-in or
														maintenance [E55]}; {Clear
														spills immediately [C&H13]}.
SU22	2 - Use in	5	5-25%	1-4		1.80	1.371	5-25%	gloves	0.16	0.60	0.10	0.70	Limit the substance content
	closed			hours										in the product to 25%
	process, no													[OC18]. Avoid carrying out
	likelihood of													operation for more than 4
	exposure													hours [OC12]; Wear suitable
														gloves tested to EN374
														[PPE15].
														{Handle substance within a
														closed system [E47]}.
														(Drain down and flush
														system prior to equipment
														break-in or maintenance
														[E55]}; {Clear spills
														immediately [C&H13]}.
SU22	2 - Use in	5	1-5%			1.00	1.371	1-5%		0.27	0.33	0.16	0.50	Limit the substance content
	closed													in the product to 5% [OC17];
	process, no													
	likelihood of													{Ensure the system is
	exposure													closed}; {Drain down and
														flush system prior to
														equipment break-in or



													maintenance [E55]}; {Clear
													spills immediately [C&H13]}.
SU3	3 - Use in	1				1.00	0.343		0.34	0.33	0.20	0.54	No specific measures
	closed batch												identified [EI18].
	process												
	(synthesis or												{Ensure the system is
	formulation)												closed} {Drain down and
	,												flush system prior to
													equipment break-in or
													maintenance [E55]}; {Clear
													spills immediately [C&H13]}.
01100	0. 11	_	F 050/	4.4		4.00	0.040	F 050/	0.04	0.00	0.40	0.70	
SU22	3 - Use in	5	5-25%	1-4		1.80	0.343	5-25%	0.21	0.60	0.12	0.72	Limit the substance content
	closed batch			hours									in the product to 25%
	process												[OC18]. Avoid carrying out
	(synthesis or												operation for more than 4
	formulation)												hours [OC12];
													{Ensure the system is
													closed} {Drain down and
													flush system prior to
													equipment break-in or
													maintenance [E55]}; {Clear
													spills immediately [C&H13]}.
SU22	3 - Use in	5	1-5%			1.00	0.343	1-5%	0.07	0.33	0.04	0.37	Limit the substance content
	closed batch												in the product to 5% [OC17];
	process												p. caact to c/c [c c . /],
	(synthesis or												{Ensure the system is
	formulation)												closed} {Drain down and
	iorinuiation)												
													flush system prior to
													equipment break-in or
													maintenance [E55]}; {Clear
													spills immediately [C&H13]}.



SU3 4 - U															
	Use in	25	90	5-25%			1.50	6.857	5-25%	gloves-basic	0.41	0.50	0.24	0.74	Limit the substance content
bato	ch and									training					in the product to 25%
othe	er														[OC18]. Ensure material
prod	cess														transfers are under
(syn	nthesis)														containment or extract
whe	ere														ventilation [E66]. Provide
oppe	oortunity														extract ventilation to material
for e	exposure														transfer points and other
arise	ses														openings [E82].Wear
															chemically resistant gloves
															(tested to EN374) in
															combination with 'basic'
															employee training [PPE16].
															{Use bulk or semi-bulk
															handling systems [E43]}.
															Drain down and flush
															system prior to equipment
															break-in or maintenance
															[E55]}. {Clean equipment
															and the work area every day
															[C&H3]}. {Clear spills
															immediately [C&H13]}.
SU3 4-l	Use in	25		5-25%	half		1.50	6.857	5-25%	gloves-basic	0.41	0.50	0.24	0.74	Limit the substance content
bato	ch and				mask					training					in the product to 25%
othe	er														[OC18]; Wear chemically
proc	cess														resistant gloves (tested to
(syn	nthesis)														EN374) in combination with
whe	ere														'basic' employee training
орре	oortunity														[PPE16].;
for e	exposure														Wear a respirator conforming
arise	ses														to EN140 with Type
															A/P2 filter or better [PPE29]
															{Use bulk or semi-bulk
															handling systems [E43]};



																	{Discharge sacks via suitable
																	vented charge chute [E44]};
																	{Drain down and flush
																	system prior to equipment
																	break-in or maintenance
																	[E55]}; {Clean equipment
																	and the work area every day
																	[C&H3]}; {Clear spills
																	immediately [C&H13]}.
																	{Avoid carrying out operation
																	for more than 4 hours
																	[OC12]}.
SU3	4 - Use in	25		1-5%	15				1.00	6.857	1-5%	gloves	0.27	0.33	0.16	0.50	Limit the substance content
	batch and				min-1												in the product to 5% [OC17].
	other				hour												Avoid carrying out operation
	process																for more than 1 hour [OC11];
	(synthesis)																Wear suitable gloves tested
	where																to EN374 [PPE15].
	opportunity																
	for exposure																{Use bulk or semi-bulk
	arises																handling systems [E43]};
																	{Discharge sacks via suitable
																	vented charge chute [E44]};
																	{Drain down and flush
																	system prior to equipment
																	break-in or maintenance
																	[E55]}; {Clean equipment
																	and the work area every day
																	[C&H3]}.; {Clear spills
																	immediately [C&H13]}.
SU3	4 - Use in	25		1-5%	1-4		0.25	FFP1	0.75	6.857	1-5%	gloves	0.27	0.25	0.16	0.41	Limit the substance content
	batch and				hours			(APF=4)									in the product to 5% [OC17].
	other																Avoid carrying out operation
	process																for more than 4 hours
	(synthesis)																[OC12]; Wear a disposable
	where																dust mask FFP1 or better;
	l	l	1	l .	1	1	1	l	l		l		1		l		i .



	opportunity																Wear suitable gloves tested
	for exposure																to EN374 [PPE15].
	arises																
																	{Use bulk or semi-bulk
																	handling systems [E43]};
																	{Discharge sacks via suitable
																	vented charge chute [E44]};
																	{Drain down and flush
																	system prior to equipment
																	break-in or maintenance
																	[E55]}; {Clean equipment
																	and the work area every day
																	[C&H3]}; {Clear spills
																	immediately [C&H13]}.
SU22	4 - Use in	50		5-25%	1-4	half			1.80	6.857	5-25%	gloves-basic	0.41	0.60	0.24	0.84	Limit the substance content
	batch and				hours	mask						training					in the product to 25%
	other											_					[OC18]. Avoid carrying out
	process																operation for more than 4
	(synthesis)																hours [OC12]; Wear
	where																chemically resistant gloves
	opportunity																(tested to EN374) in
	for exposure																combination with 'basic'
	arises																employee training [PPE16];
																	Wear a respirator conforming
																	to EN140 with Type
																	A/P2 filter or better
																	[PPE29];
																	{Use bulk or semi-bulk
																	handling systems [E43]};
																	{Discharge sacks via suitable
																	vented charge chute [E44]};
																	{Drain down and flush
																	system prior to equipment
																	break-in or maintenance
																	[E55]}; {Clean equipment
L	1	1	1	l		1	l .	I	l		l		l	1	l .		



															and the work area every day [C&H3]}; {Clear spills
															immediately [C&H13]}.
SU22	4 - Use in	50	1-5%	15			2.00	6.857	1-5%	gloves	0.27	0.67	0.16	0.83	Limit the substance content
	batch and			min-1											in the product to 5% [OC17];
	other			hour											Avoid carrying out operation
	process														for more than 1 hour [OC11];
	(synthesis)														Wear suitable gloves tested
	where														to EN374 [PPE15].
	opportunity for exposure														{Use bulk or semi-bulk
	arises														handling systems [E43]};
															{Discharge sacks via suitable
															vented charge chute [E44]};
															Drain down and flush
															system prior to equipment
															break-in or maintenance
															[E55]}; {Clean equipment
															and the work area every day
															[C&H3]}; {Clear spills
															immediately [C&H13]}.
SU22	4 - Use in	50	1-5%	1-4	0.25	FFP1	1.50	6.857	1-5%	gloves	0.27	0.50	0.16	0.66	Limit the substance content
	batch and			hours		(APF=4)									in the product to 5% [OC17;
	other														Avoid carrying out operation
	process														for more than 4 hours [OC12;
	(synthesis)														Wear suitable gloves tested
	where														to EN374 [PPE15]. Wear a
	opportunity														disposable dust mask FFP1
	for exposure arises														(APF=4) or better;
	นแงธง														{Use bulk or semi-bulk
															handling systems [E43]};
															{Discharge sacks via suitable
															vented charge chute [E44]};
															{Drain down and flush
															system prior to equipment



																break-in or maintenance
																[E55]}; {Clean equipment
																and the work area every day
																[C&H3]}; {Clear spills
																immediately [C&H13]}.
SU3	5 -Mixing or	25	90	5-25%				1.50	13.714	5-25%	gloves-specific	0.41	0.50	0.24	0.74	Limit the substance content
	blending in										training					in the product to 25%
	batch															[OC18]. Ensure material
	processes															transfers are under
	(multistage															containment or extract
	and/or															ventilation [E66]; Provide
	significant															extract ventilation to material
	contact)															transfer points and other
																openings [E82]. Wear
																chemically resistant gloves
																(tested to EN374) in
																combination with specific
																activity training [PPE17].
																{Use bulk or semi-bulk
																handling systems [E43]}.
																{Drain down and flush
																system prior to equipment
																break-in or maintenance
																[E55]}. {Clean equipment
																and the work area every day
																[C&H3]}. {Clear spills
																immediately [C&H13]}.
SU3	5 -Mixing or	25		5-25%		half		1.50	13.714	5-25%	gloves-specific	0.41	0.50	0.24	0.74	Limit the substance content
	blending in					mask					training					in the product to 25%
	batch															[OC18].Wear chemically
	processes															resistant gloves (tested to
	(multistage															EN374) in combination with
	and/or															specific activity training
				L	l	L	L	l			l	1	l	l		,

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						ı	1	1	1	1			1					
		significant																[PPE17].;
		contact)																Wear a respirator conforming
																		to EN140 with Type
																		A/P2 filter or better [PPE29]
																		(Hankullana 1959)
																		{Use bulk or semi-bulk
																		handling systems [E43]};
																		{Discharge sacks via suitable
																		vented charge chute [E44]};
																		{Drain down and flush
																		system prior to equipment
																		break-in or maintenance
																		[E55]}. {Clean equipment
																		and the work area every day
																		[C&H3]}; {Clear spills
																		immediately [C&H13]}.
																		{Avoid carrying out operation
																		for more than 4 hours
																		[OC12]}.
	SU3	5 -Mixing or	25		1-5%	1-4		0.25	FFP1	0.75	13.714	1-5%	gloves	0.55	0.25	0.33	0.58	Limit the substance content
		blending in				hours			(APF=4)									in the product to 5% [OC17].
		batch																Avoid carrying out operation
		processes																for more than 4 hours
		(multistage																[OC12]; Wear a disposable
		and/or																dust mask FFP1 (APF1) or
		significant																better; Wear suitable gloves
		contact)																tested to EN374 [PPE15].
																		{Use bulk or semi-bulk
																		handling systems [E43]};
																		{Discharge sacks via suitable
																		vented charge chute [E44]};
																		Drain down and flush
																		system prior to equipment
																		break-in or maintenance
																		[E55]}. {Clean equipment
ᆫ			l	1			<u> </u>						1	1				r - m (m e elemente mente



Suze S-Mixing or So S-25% 1-4 half hours mask S-25% gloves-specific training Suze S-Mixing or So S-25% S-2				•		•										
SU22 5-Mixing or 5-Mixing or 5 5-5% 1-4 half hours blading in blatch processes (multistage and/or significant contact)																and the work area every day
SU22 5-Mixing or blending in batch processes (multistage and/or significant contact) SU23 5-Mixing or blending in batch processes (multistage and/or significant contact) SU24 5-Mixing or blending in batch processes (multistage and/or significant contact) SU25 5-Mixing or 50 5 5.25% 1.4 half hours mask 1.80 13.714 5.25% gloves-specific training 0.41 0.60 0.24 1.80 1.80 1.80 1.80 1.80 1.80 1.80 1.80																[C&H3]}. {Clear spills
blending in batch processes (multistage and/or significant contact) Note: The product of the product of the processes (multistage and/or significant contact) Note: The product of the product of the processes (multistage and/or significant contact) Note: The product of the product of the processes (losted to EN374) in combination with specific activity training [PPE17]; Wear a respirator conforming to EN140 with Type A/P2 filter or better [PPE29]; (Use bulk or semi-bulk handling systems [E43]); (Discharge sacks via suitable vented charge chute [E44]); (Drain down and flush system prior to equipment break-in or maintenance [E55]). (Clean equipment and the work area every day [CAH3]); (Clear spills immediately (C&H13]). SU22 5 -Mixing or 50 1-5% 15 2.00 13.714 1-5% gloves-basic 0.27 0.67 0.16 0.83 Limit the substance content																immediately [C&H13]}.
batch processes (multistage and/or significant contact) Suzz 5-Mixing or 50 1-5% 15 2.00 13.714 1-5% gloves-basic 0.27 0.67 0.16 0.83 Limit the substance content to operation for more than 4 hours [OC18]. Avoid carrying out operation for more than 4 hours [OC18]. Wear chemically resistant gloves (tested to EN374) in combination with specific activity training [PPE17]; Wear a respirator conforming to EN140 with Type A/P2 filter or better [PPE29]; Use bulk or semi-bulk handling systems [E43]); (Discharge sacks via suitable vented charge chute [E44]); (Drain down and flush system prior to equipment and the work area every day [C8H3]]; (Clear equipment and the work area every day [C8H3]); (Clear spills immediately [C8H3]); (Elear spills immedi	SU22	5 -Mixing or	50	5-25%	1-4	half		1.80	13.714	5-25%	gloves-specific	0.41	0.60	0.24	0.84	Limit the substance content
processes (multistage and/or significant contact) In the processes (multistage and/or significant content) In the processes (multistage and/or significant) In the processes (tested to EN374) in combination of the process (tested to EN374) in combination with specific activity training (PPE17]; Wear a respirator conforming to EN140 with Type AP2 filter or better (PPE29); (Use bulk or semi-bulk handing systems [E43]); (Discharge sacks via suitable vented charge chute [E44]); (Drain down and flush system prior to equipment break-in or maintenance (E55)). (Clean equipment and the work area every day (C8H3)); (Clean equipment and the work area every day (C8H3)); (Clean spills immediately (C8H13)).		blending in			hours	mask					training					in the product to 25%
(multistage and/or significant contact) In ours [OC12]. Wear chemically resistant gloves (tested to EN374) in combination with specific activity training [PPE17]; Wear a respirator conforming to EN140 with Type A/P2 filter or better [PPE29]; (Use bulk or semi-bulk handling systems [E43]); (Discharge sacks via suitable vented charge chute [E44]); (Drain down and flush system prior to equipment break-in or maintenance [E55]); (Clean equipment and the work area every day [C&H3]); (Clear); (Clea		batch														[OC18]. Avoid carrying out
and/or significant contact) and/or significant contact (tested to EN374) in combination with specific activity training [PPE17]; Wear a respirator conforming to EN140 with Type AP2 filter or better [PPE29]; (Use bulk or semi-bulk handling systems [E43]); (Discharge sacks via suitable vented charge chute [E44]); (Drain down and flush system prior to equipment break-in or maintenance [E55]); (Clean equipment and the work area every day [C&H3]); (Clear spills immediately [C&H3]); (Clear spills immediately [C&H3]).		processes														operation for more than 4
significant contact) significant contact) significant contact) significant contact) (tested to EN374) in combination with specific activity training [PPE17]; Wear a respirator conforming to EN140 with Type A/P2 filter or better [PPE29]; {Use bulk or semi-bulk handling systems [E43]); {Discharge sacks via suitable vented charge chute [E44]); {Drain down and flush system prior to equipment break-in or maintenance [E55]). (Clean equipment and the work area every day [C&H3]); (Clear spills immediately [C&H13]). SU22 5-Mixing or 50 1-5% 15 2.00 13.714 1-5% gloves-basic 0.27 0.67 0.16 0.83 Limit the substance content		(multistage														hours [OC12]. Wear
contact) contact) contact) combination with specific activity training [PPE17]; Wear a respirator conforming to EN140 with Type A/P2 filter or better [PPE29]; {Use bulk or semi-bulk handling systems [E43]); {Discharge sacks via suitable vented charge chute [E44]); {Drain down and flush system prior to equipment break-in or maintenance [E55]}. {Clean equipment and the work area every day [C&H3]); {Clear spills immediately [C&H13]}. SU22 5 -Mixing or 50 1-5% 15 2.00 13.714 1-5% gloves-basic 0.27 0.67 0.16 0.83 Limit the substance content		and/or														chemically resistant gloves
activity training [PPE17]; Wear a respirator conforming to EN140 with Type A/P2 filter or better [PPE29]; {Use bulk or semi-bulk handling systems [E43]}; {Discharge sacks via suitable vented charge chute [E44]}; {Drain down and flush system prior to equipment break-in or maintenance [E55]]. {Clean equipment and the work area every day [C&H3]]; {Clear spills immediately [C&H13]}. SU22 5 -Mixing or 50 1-5% 15 2.00 13.714 1-5% gloves-basic 0.27 0.67 0.16 0.83 Limit the substance content		significant														(tested to EN374) in
Wear a respirator conforming to EN140 with Type A/P2 filter or better [PPE29]; {Use bulk or semi-bulk handling systems [E43]]; {Discharge sacks via suitable vented charge chute [E44]]; {Drain down and flush system prior to equipment break-in or maintenance [E55]]. (Clean equipment and the work area every day [C&H3]]; (Clear spills immediately [C&H13]]. SU22 5-Mixing or 50 1-5% 15 2.00 13.714 1-5% gloves-basic 0.27 0.67 0.16 0.83 Limit the substance content		contact)														combination with specific
to EN140 with Type A/P2 filter or better [PPE29]; {Use bulk or semi-bulk handling systems [E43]}; {Discharge sacks via suitable vented charge chute [E44]}; {Drain down and flush system prior to equipment break-in or maintenance [E55]]. {Clean equipment and the work area every day [C&H3]]; {Clear spills immediately [C&H13]]. SU22 5-Mixing or 50 1-5% 15 2.00 13.714 1-5% gloves-basic 0.27 0.67 0.16 0.83 Limit the substance content																activity training [PPE17];
A/P2 filter or better [PPE29]; {Use bulk or semi-bulk handling systems [E43]}; {Discharge sacks via suitable vented charge chute [E44]}; {Drain down and flush system for maintenance [E55]}. {Clean equipment and the work area every day [C&H3]}; {Clear spills immediately [C&H13]}. SU22 5 -Mixing or 50 1-5% 15 2.00 13.714 1-5% gloves-basic 0.27 0.67 0.16 0.83 Limit the substance content																Wear a respirator conforming
[PPE29]; {Use bulk or semi-bulk handling systems [E43]}; {Discharge sacks via suitable vented charge chute [E44]}; {Drain down and flush system prior to equipment break-in or maintenance [E55]}. {Clean equipment and the work area every day [C&H3]}; {Clear spills immediately [C&H13]}. SU22 5 -Mixing or 50 1-5% 15 2.00 13.714 1-5% gloves-basic 0.27 0.67 0.16 0.83 Limit the substance content																to EN140 with Type
SU22 5 -Mixing or 50 1-5% 15 2.00 13.714 1-5% gloves-basic 0.27 0.67 0.16 0.83 Limit the substance content																A/P2 filter or better
handling systems [E43]; {Discharge sacks via suitable vented charge chute [E44]]; {Drain down and flush system prior to equipment break-in or maintenance [E55]}. {Clean equipment and the work area every day [C&H3]}; {Clear spills immediately [C&H13]}. SU22 5 -Mixing or 50 1-5% 15 2.00 13.714 1-5% gloves-basic 0.27 0.67 0.16 0.83 Limit the substance content																[PPE29];
handling systems [E43]; {Discharge sacks via suitable vented charge chute [E44]]; {Drain down and flush system prior to equipment break-in or maintenance [E55]}. {Clean equipment and the work area every day [C&H3]}; {Clear spills immediately [C&H13]}. SU22 5 -Mixing or 50 1-5% 15 2.00 13.714 1-5% gloves-basic 0.27 0.67 0.16 0.83 Limit the substance content																
SU22 5 -Mixing or 50 1-5% 15 2.00 13.714 1-5% gloves-basic 0.27 0.67 0.16 0.83 Limit the substance content																{Use bulk or semi-bulk
vented charge chute [E44]}; {Drain down and flush system prior to equipment break-in or maintenance [E55]}. {Clean equipment and the work area every day [C&H3]}; {Clear spills immediately [C&H13]}. SU22 5 -Mixing or 50 1-5% 15 2.00 13.714 1-5% gloves-basic 0.27 0.67 0.16 0.83 Limit the substance content																handling systems [E43]};
SU22 5 -Mixing or 50 1-5% 15 2.00 13.714 1-5% gloves-basic 0.27 0.67 0.16 0.83 Limit the substance content																{Discharge sacks via suitable
system prior to equipment break-in or maintenance [E55]}. {Clean equipment and the work area every day [C&H3]}; {Clear spills immediately [C&H13]}. SU22 5 -Mixing or 50 1-5% 15 2.00 13.714 1-5% gloves-basic 0.27 0.67 0.16 0.83 Limit the substance content																vented charge chute [E44]};
SU22 5 -Mixing or 50 1-5% 15 2.00 13.714 1-5% gloves-basic 0.27 0.67 0.16 0.83 Limit the substance content																(Drain down and flush
SU22 5 -Mixing or 50 1-5% 15 2.00 13.714 1-5% gloves-basic 0.27 0.67 0.16 0.83 Limit the substance content																system prior to equipment
SU22 5 -Mixing or 50 1-5% 15 2.00 13.714 1-5% gloves-basic 0.27 0.67 0.16 0.83 Limit the substance content																break-in or maintenance
SU22 5 -Mixing or 50 1-5% 15 2.00 13.714 1-5% gloves-basic 0.27 0.67 0.16 0.83 Limit the substance content																[E55]}. {Clean equipment
SU22 5 -Mixing or 50 1-5% 15 2.00 13.714 1-5% gloves-basic 0.27 0.67 0.16 0.83 Limit the substance content																and the work area every day
SU22 5 -Mixing or 50 1-5% 15 2.00 13.714 1-5% gloves-basic 0.27 0.67 0.16 0.83 Limit the substance content																[C&H3]}; {Clear spills
																immediately [C&H13]}.
	SU22	5 -Mixing or	50	1-5%	15			2.00	13.714	1-5%	gloves-basic	0.27	0.67	0.16	0.83	Limit the substance content
blending in min-1 min-1 training in the product to 5% [OC17].		blending in			min-1						training					in the product to 5% [OC17].
batch hour Avoid carrying out operation		batch			hour											Avoid carrying out operation
processes for more than 1 hour [OC11];		processes														for more than 1 hour [OC11];
(multistage Wear chemically resistant		(multistage														Wear chemically resistant
and/or gloves (tested to EN374) in		and/or														gloves (tested to EN374) in
significant combination with 'basic'		significant														combination with 'basic'
contact) employee training [PPE16];		contact)														employee training [PPE16];



		•						•							
															{Use bulk or semi-bulk handling systems [E43]}; {Discharge sacks via suitable vented charge chute [E44]}; {Drain down and flush system prior to equipment break-in or maintenance [E55]}. {Clean equipment and the work area every day [C&H3]}. {Clear spills immediately [C&H13]}.
SU22	5 -Mixing or blending in batch processes (multistage and/or significant contact)	50	1-5%	1-4 hours	0.25	FFP1 (APF=4)	1.50	13.714	1-5%	gloves	0.55	0.50	0.33	0.83	Limit the substance content in the product to 5% [OC17] .Avoid carrying out operation for more than 4 hours [OC12]; Wear a disposable dust mask FFP1 (APF=4) or better; Wear suitable gloves tested to EN374 [PPE15].
															{Use bulk or semi-bulk handling systems [E43]}. {Discharge sacks via suitable vented charge chute [E44]}; Drain down and flush system prior to equipment break-in or maintenance [E55]}. {Clean equipment and the work area every day [C&H3]}. {Clear spills immediately [C&H13]}.



SU3 8a -Transfer of chemicals of chemicals from/to vessels/ large containers at non dedicated 1.80 13.714 5-25% gloves-specific training 1.80 13.714 5-25% gloves-specific training 1.80 13.714 5-25% gloves-specific training 1.80 0.41 0.60 0.24 0.84 Limit the substant in the product to [OC18]. Ensurer transfers are under containment or eventilation transfer points are transfer points are transfer points are points are transfer points are transf	25% material ler xtract Provide n to material and other
from/to vessels/ large containers at non from/to vessels/ large containers at extract ventilation [OC18]. Ensure r transfers are und containment or e ventilation [E66].	material der xtract Provide n to material nd other
vessels/ large containers at non non transfers are und containment or e ventilation [E66].	der xtract Provide n to material nd other
large containment or e ventilation [E66].	xtract Provide n to material nd other
containers at non ventilation [E66].	Provide n to material nd other
non extract ventilation	n to material nd other
	nd other
dedicated	
facilities openings [E82].	
carrying out oper	
more than 4 hour	
Wear chemically	
gloves (tested to	
combination with	
activity training [I	
	-
{Use bulk or sem	ıi-bulk
handling systems	
system prior to e	
break-in or maint	
[E55]}. {Clean ed	
and the work are	
[C&H3]]. {Clear s	
immediately [C&	
SU3 8a -Transfer 50 90 1-5%	
of chemicals training in the product to	25%
from/to [OC18]. Ensure r	naterial
vessels/ vessels/ transfers are und	
large containment or e	
containers at ventilation [E66].	
non extract ventilation	
dedicated transfer points ar	
facilities openings [E82].	
carrying out oper	
more than 4 hour	
	'S O O 1 Z I.



										•							
																	Wear chemically resistant
																	gloves (tested to EN374) in
																	combination with specific
																	activity training [PPE17].
																	, , , ,
																	{Use bulk or semi-bulk
																	handling systems [E43]}.
																	{Drain down and flush
																	system prior to equipment
																	break-in or maintenance
																	[E55]}. {Clean equipment
																	and the work area every day
																	[C&H3]}. {Clear spills
																	immediately [C&H13]}.
SU3; SU22	8a -Transfer of chemicals from/to vessels/ large containers at non dedicated facilities	50		5-25%	1-4 hours	half mask			1.80	13.714	5-25%	gloves-specific training	0.41	0.60	0.24	0.84	Limit the substance content in the product to 25% [OC18]. Avoid carrying out operation for more than 4 hours [OC12]; Wear chemically resistant gloves (tested to EN374) in combination with specific activity training [PPE17]. Wear a respirator conforming to EN140 with Type
			i .				l	l .									



															A/P2 filter or better [PPE29]
															{Use bulk or semi-bulk handling systems [E43]}. {Discharge sacks via suitable vented charge chute [E44]}. {Drain down and flush system prior to equipment break-in or maintenance [E55]}. {Clean equipment and the work area every day [C&H3]}. {Clear spills immediately [C&H13]}.
SU3; SU22	8a -Transfer of chemicals from/to vessels/ large containers at non dedicated	50	80	1-5%			2.00	13.714	1-5%	gloves-basic training	0.27	0.67	0.16	0.83	Limit the substance content in the product to 5% [OC17]. Ensure material transfers are under containment or extract ventilation [E66]. Provide extract ventilation to material transfer points and other openings [E82]. Wear
	facilities														chemically resistant gloves (tested to EN374) in combination with 'basic' employee training [PPE16]. {Use bulk or semi-bulk handling systems [E43]}.
															{Drain down and flush system prior to equipment break-in or maintenance [E55]}. {Clean equipment and the work area every day [C&H3]}; {Clear spills immediately [C&H13]}.
SU3;	8a -Transfer	50		1-5%	15		2.00	13.714	1-5%	gloves-basic	0.27	0.67	0.16	0.83	Limit the substance content



SU22	of chemicals			min-1						training					in the product to 5% [OC17].
	from/to			hour											Avoid carrying out operation
	vessels/														for more than 1 hour [OC11];
	large														Wear chemically resistant
	containers at														gloves (tested to EN374) in
	non														combination with 'basic'
	dedicated														employee training [PPE16];
	facilities														
															{Use bulk or semi-bulk
															handling systems [E43]}.
															{Discharge sacks via suitable
															vented charge chute [E44]}.
															{Drain down and flush
															system prior to equipment
															break-in or maintenance
															[E55]}. {Clean equipment
															and the work area every day
															[C&H3]}. {Clear spills
															immediately [C&H13]}.
SU3;	8a -Transfer	50	1-5%	1-4	0.25	FFP1	1.50	13.714	1-5%	gloves	0.55	0.50	0.33	0.83	Limit the substance content
SU22	of chemicals			hours		(APF=4)									in the product to 5% [OC17].
	from/to														Avoid carrying out operation
	vessels/														for more than 4 hours
	large														[OC12]; Wear a disposable
	containers at														dust mask FFP1 (APF=4) or
	non														better; Wear suitable gloves
	dedicated														tested to EN374 [PPE15].
	facilities														
															{Use bulk or semi-bulk
															handling systems [E43]}.
															{Discharge sacks via suitable
															vented charge chute [E44]};
															{Drain down and flush
															system prior to equipment
															break-in or maintenance
															[E55]}. {Clean equipment



															and the work area every day
															[C&H3]}; {Clear spills
															immediately [C&H13]}.
															initiodiately [eartre]].
SU3	8a -Transfer	50		1-5%	half		1.00	13.714	1-5%	gloves	0.55	0.33	0.33	0.66	Limit the substance content
SU22	of chemicals				mask										in the product to 5% [OC17]
	from/to														Wear chemically resistant
	vessels/														gloves tested to EN374
	large														[PPE15]. Wear a respirator
	containers at														conforming to EN140 with
	non														Type A/P2 filter or better
	dedicated														[PPE29].
	facilities														
															{Use bulk or semi-bulk
															handling systems [E43]}.
															{Discharge sacks via suitable
															vented charge chute [E44]}.
															{Drain down and flush
															•
															system prior to equipment
															[E55]}. {Clean equipment
															and the work area every day
															[C&H3]}. {Clear spills
SU3	8b -Transfer	25	90	5-25%			1.50	6.857	5-25%	gloves-basic	0.41	0.50	0.24	0.74	
				5 _5 /5			50	5.50,	2 _0,0	_	J	0.00		J., .	
										training					
	large														containment or extract
	containers at														ventilation [E66]. Provide
	dedicated														extract ventilation to material
SU3	containers at	25	90	5-25%			1.50	6.857	5-25%	gloves-basic training	0.41	0.50	0.24	0.74	break-in or maintenance [E55]}. {Clean equipment and the work area every of [C&H3]}. {Clear spills immediately [C&H13]}. Limit the substance context in the product to 25% [OC18]. Ensure material transfers are under containment or extract ventilation [E66]. Provide



facilities			1	1	1		1	1		1	T					
SU3 8b-Transfer 25 5-25% half mask from/to vessels/ large containers at dedicated facilities at dedicated facilities for them of the service		facilities														
SU3 8b-Transfer 25 5-25% half softendiate with a service and the work area every day [CAH3]. (Clear apills immediately (CAH3]). (Clear apills immediately (CAH3]). (Clear apills immediately (CAH3]). (Clear apills immediately (CAH3]). (Infinity of chemicals from/to vessels) large containers at dodicated facilities at dodicated facilities (CAH3)																openings [E82].Wear
SU3 8b -Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU3 8b -Transfer of chemicals from/to easily large containers at dedicated facilities SU3 8b -Transfer of chemicals from/to easily large containers at dedicated facilities SU3 8b -Transfer of chemicals from/to easily large containers at dedicated facilities SU3 8b -Transfer of chemicals from/to easily large containers at dedicated facilities SU3 8b -Transfer of chemicals from/to easily large containers at dedicated facilities SU3 8b -Transfer of chemicals from/to easily large containers at dedicated facilities SU3 8b -Transfer of chemicals from/to easily large easily large containers at dedicated facilities SU3 8b -Transfer of chemicals from/to easily large easily lar																chemically resistant gloves
SU3 8b -Transfer of chemicals from to vessels' large containers at dedicated facilities SU3 8b -Transfer of chemicals from to equipment and the work area every day [C8H3]]. (Clear equipment and the work area e																(tested to EN374) in
SU3 8b -Transfer containers at dedicated facilities SU4 1.50 6.857 5-25% gloves-basic SU5 8b -Transfer containers content in the product to 25% [Cot18]; Wear chemically resistant gloves (tested to EN374) in combination with basic employee training [PPE16].; Wear a respirator conforming to EN140 with Type A/P2 filter or better (PPE28) (Use bulk or semi-bulk handling systems [E43]); [Discharge sacks via suitable vented charge chulc [E44]); [Drain down and flush system prior to equipment break-in or maintenance [E55]); (Clean equipment contains a contain the product of the prod																combination with 'basic'
SU3 8b-Transfer of chemicals from/to vessels/ large containers at dedicated facilities Su3 Su4 Su5																employee training [PPE16].
SU3 8b-Transfer of chemicals from/to vessels/ large containers at dedicated facilities Su3 Su4 Su5																
SU3 8b-Transter of chemicals from/to vessels/ large containers at dedicated facilities Su3 (accidence of the second of the seco																{Use bulk or semi-bulk
SU3 8b -Transfer of chemicals from to vessels/ large containers at dedicated facilities SU3 8b -Transfer of chemicals from to vessels/ large containers at dedicated facilities SU3 8b -Transfer of chemicals from to vessels/ large containers at dedicated facilities SU3 8b -Transfer of chemicals from to vessels/ large containers at dedicated facilities SU3 8b -Transfer of chemicals mask mask mask mask mask mask mask mas																handling systems [E43]}.
SU3 8b-Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU3 8b-Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU3 8b-Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU3 8b-Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU3 8b-Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU3 8b-Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU3 8b-Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU3 8b-Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU3 8b-Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU3 8b-Transfer of chemicals from/to containers on the sustainer for sustainer for containers on the s																(Drain down and flush
SU3 8b -Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU3 8b -Transfer of chemicals and the work area every day [C&H3]]. Substance content in the product to 25% [CO18]; Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training [PPE16]; Wear a respirator conforming to EN140 with Type A/P2 filter or better [PPE29] (Use bulk or semi-bulk handling systems [E43]); (Drain down and flush system prior to equipment break-in or maintenance [E55]); (Clean equipment and the work area every day [CEH13]). (Clean equipment and the work area every day [CEH3]); (Drain down and flush system prior to equipment).																system prior to equipment
SU3 8b -Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU3 8b -Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU3 8b -Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU3 8b -Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU3 8b -Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU3 8b -Transfer of chemicals from/to vessels/ large ves																break-in or maintenance
SU3 8b-Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU3 8b-Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU3 8b-Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU3 8b-Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU3 8b-Transfer 25 5-25% half mask 1.50 6.857 5-25% gloves-basic training (O-14) 0.50 0.24 0.74 Limit the substance content in the product to 25% (OC18); Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training (IPPE16).; Wear a respirator conforming to EN140 with Type A/P2 filter or better (IPPE29) (Use bulk or semi-bulk handling systems [E43]); (Discharge sacks via suitable vented charge chute (E44]); (Drain down and flush system prior to equipment break-in or maintenance (E55)); (Clean equipment																[E55]}. {Clean equipment
SU3 8b -Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU3 8b -Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU3 8b -Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU3 8b -Transfer 05 5-25% half mask 1.50 6.857 5-25% gloves-basic training 1.50 0.41 0.50 0.24 0.74 Limit the substance content in the product to 25% [OC18]; Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training [PPE16]; Wear a respirator conforming to EN140 with Type A/P2 filter or better [PPE29] {Use bulk or semi-bulk handling systems [E43]]; {Discharge sacks via suitable vented charge chute [E44]]; {Drain down and flush system prior to equipment break-in or maintenance [E55]]; {Clean equipment																and the work area every day
SU3 8b-Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU3 8b-Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU3 8b-Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU3 8b-Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU3 8b-Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU3 8b-Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU3 8b-Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU3 8b-Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU3 8b-Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU3 8b-Transfer of chemicals from/to enditional facilities from/to large facili																[C&H3]}. {Clear spills
of chemicals from/to vessels/ large containers at dedicated facilities Training In the product to 25% [OC18]; Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training [PPE16].; Wear a respirator conforming to EN140 with Type A/P2 filter or better [PPE29] Use bulk or semi-bulk handling systems [E43]]; (Discharge sacks via suitable vented charge chute [E44]); (Drain down and flush system prior to equipment break-in or maintenance [E55]); (Clean equipment																immediately [C&H13]}.
from/to vessels/ large containers at dedicated facilities [OC18]: Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training [PPE16].; Wear a respirator conforming to EN140 with Type A/P2 filter or better [PPE29] {Use bulk or semi-bulk handling systems [E43]}; {Discharge sacks via suitable vented charge chute [E44]}; {Drain down and flush system prior to equipment break-in or maintenance [E55]}; {Clean equipment	SU3	8b -Transfer	25		5-25%	half		1.50	6.857	5-25%	gloves-basic	0.41	0.50	0.24	0.74	Limit the substance content
vessels/ large containers at dedicated facilities resistant gloves (tested to EN374) in combination with 'basic' employee training [PPE16].; Wear a respirator conforming to EN140 with Type A/P2 filter or better [PPE29] (Use bulk or semi-bulk handling systems [E43]); (Discharge sacks via suitable vented charge chute [E44]); {Drain down and flush system prior to equipment break-in or maintenance [E55]); {Clean equipment		of chemicals				mask					training					in the product to 25%
large containers at dedicated facilities EN374) in combination with 'basic' employee training [PPE16].; Wear a respirator conforming to EN140 with Type A/P2 filter or better [PPE29] {Use bulk or semi-bulk handling systems [E43]); {Discharge sacks via suitable vented charge chute [E44]); {Prain down and flush system prior to equipment break-in or maintenance [E55]); {Clean equipment		from/to														[OC18]; Wear chemically
containers at dedicated facilities facilities Wear a respirator conforming to EN140 with Type A/P2 filter or better [PPE29] Use bulk or semi-bulk handling systems [E43]); (Discharge sacks via suitable vented charge chute [E44]); (Drain down and flush system prior to equipment break-in or maintenance [E55]); (Clean equipment		vessels/														resistant gloves (tested to
dedicated facilities [PPE16].; Wear a respirator conforming to EN140 with Type A/P2 filter or better [PPE29] {Use bulk or semi-bulk handling systems [E43]}; {Discharge sacks via suitable vented charge chute [E44]}; {Drain down and flush system prior to equipment break-in or maintenance [E55]}; {Clean equipment		large														EN374) in combination with
facilities Wear a respirator conforming to EN140 with Type A/P2 filter or better [PPE29] {Use bulk or semi-bulk handling systems [E43]}; {Discharge sacks via suitable vented charge chute [E44]}; {Drain down and flush system prior to equipment break-in or maintenance [E55]}; {Clean equipment		containers at														'basic' employee training
to EN140 with Type A/P2 filter or better [PPE29] {Use bulk or semi-bulk handling systems [E43]}; {Discharge sacks via suitable vented charge chute [E44]}; {Drain down and flush system prior to equipment break-in or maintenance [E55]}; {Clean equipment		dedicated														[PPE16].;
A/P2 filter or better [PPE29] {Use bulk or semi-bulk handling systems [E43]}; {Discharge sacks via suitable vented charge chute [E44]}; {Drain down and flush system prior to equipment break-in or maintenance [E55]}; {Clean equipment		facilities														Wear a respirator conforming
{Use bulk or semi-bulk handling systems [E43]}; {Discharge sacks via suitable vented charge chute [E44]}; {Drain down and flush system prior to equipment break-in or maintenance [E55]}; {Clean equipment																to EN140 with Type
handling systems [E43]]; {Discharge sacks via suitable vented charge chute [E44]]; {Drain down and flush system prior to equipment break-in or maintenance [E55]]; {Clean equipment																A/P2 filter or better [PPE29]
handling systems [E43]}; {Discharge sacks via suitable vented charge chute [E44]}; {Drain down and flush system prior to equipment break-in or maintenance [E55]}; {Clean equipment																
{Discharge sacks via suitable vented charge chute [E44]}; {Drain down and flush system prior to equipment break-in or maintenance [E55]}; {Clean equipment																{Use bulk or semi-bulk
vented charge chute [E44]]; {Drain down and flush system prior to equipment break-in or maintenance [E55]]; {Clean equipment																handling systems [E43]};
{Drain down and flush system prior to equipment break-in or maintenance [E55]}; {Clean equipment																{Discharge sacks via suitable
system prior to equipment break-in or maintenance [E55]]; {Clean equipment																vented charge chute [E44]};
break-in or maintenance [E55]}; {Clean equipment																{Drain down and flush
[E55]}; {Clean equipment																system prior to equipment
																break-in or maintenance
and the work area every day																[E55]}; {Clean equipment
																and the work area every day



															y i roddetos cannidos
															[C&H3]]; {Clear spills immediately [C&H13]}. {Avoid carrying out operation for more than 4 hours [OC12]}.
SU3	8b -Transfer of chemicals from/to vessels/ large containers at dedicated	25	1-5%	15 min-1 hour			1.00	6.857	1-5%	gloves	0.27	0.33	0.16	0.50	Limit the substance content in the product to 5% [OC17]. Avoid carrying out operation for more than 1 hour [OC11]; Wear suitable gloves tested to EN374 [PPE15].
	facilities														{Use bulk or semi-bulk handling systems [E43]}. {Discharge sacks via suitable vented charge chute [E44]}. {Drain down and flush system prior to equipment break-in or maintenance [E55]}. {Clean equipment and the work area every day [C&H3]}. {Clear spills immediately [C&H13]}.
SU3	8b -Transfer of chemicals from/to vessels/ large containers at dedicated facilities	25	1-5%		0.25	FFP1 (APF=4)	1.25	6.857	1-5%	gloves	0.27	0.42	0.16	0.58	Limit the substance content in the product to 5% [OC17]. Wear a disposable dust mask FFP1 (APF=4) or better; Wear suitable gloves tested to EN374 [PPE15]. {Use bulk or semi-bulk handling systems [E43]}.



SU22 8b -Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU24 8b -Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU25 8b -Transfer of the microscopic facilities SU26 8b -Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU27 8b -Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU28 8b -Transfer of the microscopic facilities SU29 8b -Transfer of the work every day [Cs4H13]]. [Avoid carrying out operation for more than 4 hours (Cot.12)]. Avoid carrying out operation for more than 4 hours (Cot.12)]. Avoid carrying out operation for more than 4 hours (Cot.12)]. Wear are chemically resistant gloves (tested to Eh3774) in combination with 'basic' employee training (PPE16]. Wear a respirator conforming to EN140 with Type A/P2 filter or better (PPE29); (Use bulk or semi-bulk)					 •						•						
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SU22 8b-Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU24 8b-Transfer of themicals from/to vessels/ large containers at dedicated facilities SU25 8b-Transfer of themicals from/to vessels/ large containers at dedicated facilities SU26 8b-Transfer of themicals from/to vessels/ large containers at dedicated facilities SU27 8b-Transfer of themicals from/to vessels/ large containers at dedicated facilities SU28 8b-Transfer of themicals from/to vessels/ large containers at dedicated facilities SU29 8b-Transfer of themicals from/to vessels/ large containers at dedicated facilities SU29 8b-Transfer of themicals from/to themicals from/to vessels/ large containers at dedicated facilities SU29 8b-Transfer of themicals from/to themicals from/to themicals from/to themicals from/to themicals from/to vessels/ large containers at dedicated facilities SU29 8b-Transfer of themicals from/to form/to themicals from/to themicals from/to form/to themicals from/to themicals from/to form/to form/																	vented charge chute [E44]}.
SU22 8b -Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU24 8b -Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU25 8b -Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU26 8b -Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU27 8b -Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU28 8b -Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU29 8b -Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU29 8b -Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU29 8b -Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU29 8b -Transfer of 0.41 0.60 0.24 0.84 Limit the substance content in the product to 25% [OC18]. Avoid carrying out operation for more than 4 hours [OC12]. Wear chemically resistant gloves (tested to EN374) in combination with basic' employee training [PPE16]. Wear a respirator conformint to EN140 with Type A/P2 filter or better [PPE29]; [Use bulk or semi-bulk]																	{Drain down and flush
SU22 8b -Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU24 8b -Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU25 8b -Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU26 8b -Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU27 8b -Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU28 8b -Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU29 8b -Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU29 8b -Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU29 8b -Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU29 8b -Transfer of chemicals from/to vessels/ large from/to vessels/ large containers at chemically resistant gloves (tested to EN374) in combination with 'basic' employee training (PPE16). Wear are respirator conforming to EN140 with Type A/P2 filter or better (PPE29); (Use bulk or semi-bulk)																	system prior to equipment
SU22 8b -Transfer 50 5-25% 1-4 hours of chemicals from/to vessels/ large containers at dedicated facilities SU24 8b -Transfer 50 5-25% 1-4 hours localized from/to vessels/ large containers at dedicated facilities SU25 8b -Transfer 50 5-25% 1-4 hours localized from/to vessels/ large containers at dedicated facilities SU26 8b -Transfer 50 5-25% 1-4 hours localized from/to vessels/ large containers at dedicated facilities SU27 8b -Transfer 50 5-25% 1-4 hours localized from/to vessels/ large containers at dedicated facilities SU28 8b -Transfer 50 5-25% 1-4 hours localized from/to vessels/ large containers at dedicated facilities SU29 8b -Transfer 50 5-25% 1-4 hours localized from/to vessels/ large containers at dedicated facilities SU29 8b -Transfer 50 5-25% 1-4 hours localized from/to vessels/ large containing localized from/to vessels/ large containing localized facilities SU29 8b -Transfer 50 0.41 0.60 0.24 0.84 Limit the substance content in the product to 25% [OC18], Avoid carrying out operation for more than 4 hours [OC12]: Wear chemically resistant gloves (lested to EN374) in combination with basic' employee training [PPE16]. Wear a respirator conformint to EN140 with Type A/P2 filter or better [PPE29]; [Use bulk or semi-bulk]																	break-in or maintenance
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SU22 8b -Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU24 8b -Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU25 8b -Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU26 8b -Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU27 8b -Transfer of chemicals from/to washer of chemicals from/to vessels/ large containers at dedicated facilities SU28 8b -Transfer of chemicals from/to washer of chemica																	and the work area every day
SU22 8b-Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU24 8b-Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU25 8b-Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU26 8b-Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU27 8b-Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU28 8b-Transfer of chemicals from/to mask SU29 8b-Transfer of chemicals from/to wash of chemicals from/to vessels/ large containers at dedicated facilities SU29 8b-Transfer of chemicals from/to mask SU20 8b-Transfer of chemicals from/to wash of																	[C&H3]}. {Clear spills
SU22 8b-Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU24 8b-Transfer of chemicals (a containers at dedicated facilities) SU25 8b-Transfer of chemicals (a containers at dedicated facilities) SU26 8b-Transfer of chemicals (a containers at dedicated facilities) SU27 8b-Transfer of chemicals (a containers at dedicated facilities) SU28 8b-Transfer of chemicals (a containers at dedicated facilities) SU29 8b-Transfer of chemicals (a containers at dedicated facilities) SU29 8b-Transfer of chemicals (a containers at dedicated facilities) SU29 8b-Transfer of chemicals (a containers at dedicated facilities) SU29 8b-Transfer of chemicals (a containers at dedicated facilities) SU29 8b-Transfer of chemicals (a containers at dedicated facilities) SU29 8b-Transfer of chemicals (a containers at dedicated facilities) SU29 8b-Transfer of chemicals (a containers at dedicated facilities) SU29 8b-Transfer of chemicals (a containers at dedicated facilities) SU29 8b-Transfer of chemicals (a containers at dedicated facilities) SU29 8b-Transfer of chemicals (a containers at dedicated facilities) SU29 8b-Transfer of chemicals (a containers at dedicated facilities) SU29 8b-Transfer of chemicals (a containers at dedicated facilities) SU29 8b-Transfer of chemicals (a containers at dedicated facilities) SU29 8b-Transfer of chemicals (a containers at dedicated facilities) SU29 8b-Transfer of chemicals (a containers at dedicated facilities) SU29 8b-Transfer of chemicals (a containers at dedicated facilities) SU29 8b-Transfer of chemicals (a containers at dedicated facilities) SU29 8b-Transfer of chemicals (a containers at dedicated facilities) SU29 8b-Transfer of chemicals (a containers at dedicated facilities) SU29 8b-Transfer of chemicals (a containers at dedicated facilities) SU29 8b-Transfer of chemicals (a containers at dedicated facilities) SU29 8b-Transfer of chemicals (a containers at dedicated facilities) SU29 8b-Transfer of chemicals (a containers at dedicated facilities																	immediately [C&H13]}.
SU22 8b -Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU23 8b -Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU24 8b -Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU25 8b -Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU26 8b -Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU27 8b -Transfer of chemicals from/to wask large and the substance content in the product to 25% [OC18]. Avoid carrying out operation for more than 4 hours [OC12]; Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training [PPE16]. Wear a respirator conformin to EN140 with Type A/P2 filter or better [PPE29]; SU28 bulk or semi-bulk																	{Avoid carrying out operation
SU22 8b -Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU24 8b -Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU25 8b -Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU26 8b -Transfer of chemicals from/to vessels/ large containers at dedicated facilities SU27 9c																	for more than 4 hours
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from/to vessels/ large containers at dedicated facilities facilities facilities facilities facilities form/to vessels/ large containers at dedicated facilities faciliti	SI	U22	8b -Transfer	50	5-25%	1-4	half		1.80	6.857	5-25%	gloves-basic	0.41	0.60	0.24	0.84	Limit the substance content
vessels/ large containers at dedicated facilities vessels/ large containers at dedicated facilities dedicate			of chemicals			hours	mask					training					in the product to 25%
large containers at dedicated facilities hours [OC12]; Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training [PPE16]. Wear a respirator conformin to EN140 with Type A/P2 filter or better [PPE29]; {Use bulk or semi-bulk			from/to														[OC18]. Avoid carrying out
containers at dedicated facilities chemically resistant gloves (tested to EN374) in combination with 'basic' employee training [PPE16]. Wear a respirator conformint to EN140 with Type A/P2 filter or better [PPE29]; [Use bulk or semi-bulk]			vessels/														operation for more than 4
dedicated facilities (tested to EN374) in combination with 'basic' employee training [PPE16]. Wear a respirator conformin to EN140 with Type A/P2 filter or better [PPE29]; (Use bulk or semi-bulk			large														hours [OC12]; Wear
facilities combination with 'basic' employee training [PPE16]. Wear a respirator conformin to EN140 with Type A/P2 filter or better [PPE29]; {Use bulk or semi-bulk			containers at														chemically resistant gloves
employee training [PPE16]. Wear a respirator conformin to EN140 with Type A/P2 filter or better [PPE29]; {Use bulk or semi-bulk			dedicated														(tested to EN374) in
Wear a respirator conformin to EN140 with Type A/P2 filter or better [PPE29]; {Use bulk or semi-bulk			facilities														combination with 'basic'
to EN140 with Type A/P2 filter or better [PPE29]; {Use bulk or semi-bulk																	employee training [PPE16].
A/P2 filter or better [PPE29]; {Use bulk or semi-bulk																	Wear a respirator conforming
[PPE29]; {Use bulk or semi-bulk																	to EN140 with Type
{Use bulk or semi-bulk																	A/P2 filter or better
																	[PPE29];
																	{Use bulk or semi-bulk
handling systems [E43]}.																	handling systems [E43]}.
{Discharge sacks via suitable																	{Discharge sacks via suitable
vented charge chute [E44]}.																	vented charge chute [E44]}.
{Drain down and flush																	{Drain down and flush
system prior to equipment																	system prior to equipment
break-in or maintenance																	break-in or maintenance
[E55]]. {Clean equipment																	[E55]}. {Clean equipment
and the work area every da																	and the work area every day
[C&H3]}; {Clear spills																	[C&H3]}; {Clear spills



			 												s y Froductos Califficos
															immediately [C&H13]}.
SU22	8b -Transfer of chemicals from/to vessels/ large containers at	50	1-5%	15 min-1 hour			2.00	6.857	1-5%	gloves	0.27	0.67	0.16	0.83	Limit the substance content in the product to 5% [OC17]. Avoid carrying out operation for more than 1 hour [OC11]; Wear suitable gloves tested to EN374 [PPE15].
	dedicated facilities														{Use bulk or semi-bulk handling systems [E43]}. {Discharge sacks via suitable vented charge chute [E44]}. {Drain down and flush system prior to equipment break-in or maintenance [E55]}. {Clean equipment and the work area every day [C&H3]}. {Clear spills immediately [C&H13]}.
SU22	8b -Transfer of chemicals from/to vessels/ large containers at dedicated facilities	50	1-5%	1-4 hours	0.25	FFP1 (APF=4)	1.50	6.857	1-5%	gloves	0.27	0.50	0.16	0.66	Limit the substance content in the product to 5% [OC17]. Avoid carrying out operation for more than 4 hours [OC12]; Wear a disposable dust mask FFP1 (APF=4) or better; Wear suitable gloves tested to EN374 [PPE15].
															handling systems [E43]}. {Discharge sacks via suitable vented charge chute [E44]}. {Drain down and flush system prior to equipment break-in or maintenance

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															[E55]}. {Clean equipment
															and the work area every day
															[C&H3]}. {Clear spills
															immediately [C&H13]}.
SU3	9 -Transfer of	20	90	5-25%			1.20	6.857	5-25%	gloves-basic	0.41	0.40	0.24	0.64	Limit the substance content
	chemicals									training					in the product to 25%
	into small														[OC18]. Ensure material
	containers														transfers are under
	(dedicated														containment or extract
	filling line)														ventilation [E66]; Provide
															extract ventilation to material
															transfer points and other
															openings [E82]. Wear
															chemically resistant gloves
															(tested to EN374) in
															combination with 'basic'
															employee training [PPE16].
															{Use bulk or semi-bulk
															handling systems [E43]}.
															{Drain down and flush
															system prior to equipment
															break-in or maintenance
															[E55]}.
SU3;	9 -Transfer of	20	80	5-25%			1.44	6.857	5-25%	gloves-basic	0.41	0.48	0.24	0.72	Limit the substance content
SU22	chemicals									training					in the product to 25%
	into small														[OC18]. Ensure material
	containers														transfers are under
	(dedicated														containment or extract
	filling line)														ventilation [E66]; Provide
															extract ventilation to material
															transfer points and other
															openings [E82]. Wear
															chemically resistant gloves
															(tested to EN374) in
															combination with 'basic'



															employee training [PPE16].
															{Use bulk or semi-bulk
															handling systems [E43]}.
															{Discharge sacks via suitable
															vented charge chute [E44]}.
															{Drain down and flush
															system prior to equipment
															break-in or maintenance
															[E55]}.
SU3;	9 -Transfer of	20	5-25%	1-4	0.25	FFP1	1.80	6.857	5-25%	gloves-basic	0.41	0.60	0.24	0.84	Limit the substance content
SU22	chemicals			hours		(APF=4)				training					in the product to 25%
	into small														[OC18]. Avoid carrying out
	containers														operation for more than 4
	(dedicated														hours [OC12]; Wear
	filling line)														chemically resistant gloves
															(tested to EN374) in
															combination with 'basic'
															employee training [PPE16].
															Wear a disposable dust
															mask FFP1 (APF=4) or
															better.
															{Use bulk or semi-bulk
															handling systems [E43]}.
															{Discharge sacks via suitable
															vented charge chute [E44]}.
															{Drain down and flush
															system prior to equipment
															break-in or maintenance
															[E55]}.
															ردادان.



SU3;	9 -Transfer of	20	1-5	% 1	-4		2.40	6.857	1-5%	gloves-basic	0.14	0.80	0.08	0.88	Limit the substance content
SU22	chemicals			ho	urs					training					in the product to 5% [OC17].
	into small														Avoid carrying out operation
	containers														for more than 4 hours
	(dedicated														[OC12]; Wear suitable gloves
	filling line)														tested to EN374 [PPE15].
															{Use bulk or semi-bulk
															handling systems [E43]}.
															{Discharge sacks via suitable
															vented charge chute [E44]}.
															{Drain down and flush
															system prior to equipment
															break-in or maintenance
															[E55]}.
SU3	13	5	5-2	5% 1	-4		1.80	13.714	5-25%	gloves-	0.41	0.60	0.24	0.84	Limit the substance content
SU22	-Treatment of			ho	urs					specific					in the product to 25%
	articles by									training					[OC18]. Avoid carrying out
	dipping and														operation for more than 4
	pouring														hours [OC12] Wear
															chemically resistant gloves
															(tested to EN374) in
															combination with specific
															activity training [PPE17].
															(Clean equipment and the
															work area every day
															[C&H3]}; {Clear spills
															immediately [C&H13]}.
SU3	13	5	1-5	%			 1.00	13.714	1-5%	gloves	0.55	0.33	0.33	0.66	Limit the substance content
SU22	-Treatment of														in the product to 5% [OC17].
	articles by														Wear suitable gloves tested
	dipping and														to EN374 [PPE15].
	pouring														
															(Clean equipment and the
															work area every day



															3.5	is y Froductos Quirricos
																[C&H3]}; {Clear spills immediately [C&H13]}.
SU3	14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation	10	90	5-25%				0.60	3.429	5-25%	gloves	0.41	0.20	0.24	0.44	Limit the substance content in the product to 25% [OC18]. Ensure material transfers are under containment or extract ventilation [E66]. Provide extract ventilation to material transfer points and other openings [E82]. Wear suitable gloves tested to EN374 [PPE15].
																{Clean equipment and the work area every day [C&H3]}. {Clear spills immediately [C&H13]}.
SU3	14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation	10		5-25%	15 min-1 hour			1.20	3.429	5-25%	gloves	0.41	0.40	0.24	0.64	Limit the substance content in the product to 25% [OC18]. Avoid carrying out operation for more than 1 hour [OC11]. Wear suitable gloves tested to EN374 [PPE15].
																{Clean equipment and the work area every day [C&H3]}.{Clear spills immediately [C&H13]}.
SU3	14 - Production of preparations or articles by	10		5-25%	1-4 hours	0.25	FFP1 (APF=4)	0.90	3.429	5-25%	gloves	0.41	0.30	0.24	0.54	Limit the substance content in the product to 25% [OC18]. Avoid carrying out operation for more than 4

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	tabletting, compression, extrusion, pelletisation														hours [OC12]; Wear suitable gloves tested to EN374 [PPE15]. Wear a disposable dust mask FFP1 (APF=4) or better. {Clean equipment and the work area every day [C&H3]}. {Clear spills
SU3	14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation	10	1-5%				2.00	3.429	1-5%	gloves	0.14	0.67	0.08	0.75	immediately [C&H13]}. Limit the substance content in the product to 5% [OC17]. Wear suitable gloves tested to EN374 [PPE15]. {Clean equipment and the work area every day [C&H3]}. {Clear spills immediately [C&H13]}.
SU22	14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation	50	5-25%	1-4 hours	half mask		1.80	3.429	5-25%	gloves	0.41	0.60	0.24	0.84	Limit the substance content in the product to 25% [OC18]. Avoid carrying out operation for more than 4 hours [OC12]; Wear suitable gloves tested to EN374 [PPE15]. Wear a respirator conforming to EN140 with Type A/P2 filter or better [PPE29]. {Clean equipment and the work area every day [C&H3]}. {Clear spills immediately [C&H13]}.



															Broga	s y Froductos Quimicos
SU22	14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation	50		1-5%	15 min-1 hour			2.00	3.429	1-5%	gloves	0.14	0.67	0.08	0.75	Limit the substance content in the product to 5% [OC17]. Avoid carrying out operation for more than 1 hour [OC11]; Wear suitable gloves tested to EN374 [PPE15]. {Clean equipment and the work area every day [C&H3]}. {Clear spills immediately [C&H13]}.
SU3; SU22	15 - Use of laboratory reagents in small scale laboratories	5	80					1.00	0.343			0.34	0.33	0.20	0.54	Handle in a fume cupboard or under extract ventilation [E83].
SU3	19 - Hand-mixing with intimate contact (only PPE available	25		1-5%	1-4 hours	half mask		0.30	141.429	1-5%	gloves-specific training	1.41	0.10	0.84	0.94	Limit the substance content in the product to 5% [OC17]. Avoid carrying out operation for more than 4 hours [OC12]; Wear a respirator conforming to EN140 with Type A/P2 filter or better [PPE29]; Wear chemically resistant gloves (tested to EN374) in combination with specific activity training [PPE17]. {Clean equipment and the work area every day [C&H3]}. {Clear spills immediately [C&H13]}. {Stay upwind/keep distance from source [EI22]}.



	1									T					
SU22	19 -	50	1-5%	15	half		0.20	141.429	1-5%	gloves-specific	1.41	0.07	0.84	0.91	Limit the substance content
	Hand-mixing			min-1	mask					training					in the product to 5% [OC17].
	with intimate			hour											Avoid carrying out operation
	contact (only														for more than 1 hour [OC11];
	PPE														Wear a respirator conforming
	available														to EN140 with Type A/P2
															filter or better [PPE29]; Wear
															chemically resistant gloves
															(tested to EN374) in
															combination with specific
															activity training [PPE17].
															(Clean equipment and the
															work area every day
															[C&H3]}. {Clear spills
															immediately [C&H13]}.
															{Stay upwind/keep distance
															from source [El22]}.

Safety Data Sheet According to Regulation (EC) No 1907/2006 Barcelonesa Drogas y Productos Químicos

sodium thiocyanate

Issue date: 27/09/2013 SDS Record Number:

CSSS-TCO-010-113468

Revision date: 27/09/2013 Version 2.0

Appendix 2. Environmental Exposure Estimation and Risk Characterization

Physical chemical parameters/assumptions common to all exposure scenarios

_	Τ .
Property	value
Molecular weight (g/mol) SCN	58.08
Vapor pressure (Pa) (worst case; taken from NH₄SCN)	0.015
Water solubility (g/l) (worst case; taken from KSCN)	2300
Log Kow (worst case)	0.58
Chemical class for Koc QSAR	Non-hydrophobics (default QSAR)
STP	Use STP (fresh water and marine)
Biodegradability	Readily biodegradable

PNEC values used in all the exposure scenarios

PNEC	All exposure scenarios
PNEC for aquatic organisms (mg/l)	0.0954
PNEC for marine organisms (mg/l)	0.0095
PNEC for fresh-water sediment organisms (equilibrium partitioning) (mg.kgdwt-1)	0.543
PNEC for marine sediment organisms (equilibrium partitioning) (mg.kgdwt-1)	0.0543
PNEC for terrestrial organisms (equilibrium partitioning) (mg.kgdwt-1)	0.0527
PNEC for secondary poisoning of birds and mammals (mg/kg)	0.229
PNEC for micro-organisms in a STP (mg/l)	30

1 Environment ES 1: Manufacture of NaSCN

The following information is used to calculate PEC values:

Fraction of tonnage released to waste water	8.3E-4
Fraction of main local source	1
Emission days per year	365
Flow rate of the river (m³/day)	8.6E+7
Concentration in dry sewage sludge (mg/l)	0
Concentration in surface water during emission episode (mg/l)	7.28E-4

2 Environment ES 2: Distribution and Formulation

The following information is used to calculate PEC values:

Relevant tonnage for application (tonne/year)	15260
Fraction of tonnage released to air (default value for ERC 2)	0.025
Fraction of tonnage released to waste water (default value for ERC 2)	0.02
Fraction of main local source	0.002



Emission days per year	300
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3 Environment ES3: Industrial use in a synthesis and as an intermediate

The following information is used to calculate PEC values:

Relevant tonnage for application (tonne/year)	15260
Fraction of tonnage released to air (default value for ERC 6a)	0.05
Fraction of tonnage released to waste water (default value for ERC 6a)	0.02
Fraction of main local source	0.002
Emission days per year	300

4 Environment ES 4: Use in spraying formulations

The following information is used to calculate PEC values:

Relevant tonnage for application (tonne/year)	1110
Fraction of tonnage released to air (default value for electroplating)	1E-4
Fraction of tonnage released to waste water (default value for electroplating)	0.9
Fraction of tonnage released to industrial soil (default value for electroplating)	5E-3
Fraction of main local source	2E-03
Emission days per year	220

5 Environment ES 5: Use in non spraying formulations

The following information is used to calculate PEC values:

Relevant tonnage for application (tonne/year)	600
Fraction of tonnage released to air	0
Fraction of tonnage released to waste water (default value for ERC 8d)	0.99
Fraction released to industrial soil (default value for ERC 8d)	0.01
Fraction of main local source	0.002
Emission days per year	100

6 Environment ES 6: Use in formulated products in building and construction

The following information is used to calculate PEC values:

Relevant tonnage for application (tonne/year)	15260
Fraction of tonnage released to air (default value for spERC 8f.1a.v1)	0
Fraction of tonnage released to waste water (default value for spERC 8f.1a.v1)	0.01
Fraction of tonnage released to industrial soil (default value for spERC 8f.1a.v1)	0.037
Fraction of main local source	0.002
Emission days per year (industrial use)	220
Emission days per year (service life)	365

7 Environment ES 7: Use in laboratory settings

The following information is used to calculate PEC values:

The following information is used to calculate 1 Lo values.	
Relevant tonnage for application (tonne/year)	75
Fraction of tonnage released to waste water (default value for ERC 8a)	1
Fraction of main local source	0.002
Emission days per year	20

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8 Local PEC values for all exposure scenarios

	ES1	ES2	ES3	ES4	ES5	ES6 Building/construction		ES7
	Production	Distribution/form	Intermediate/	Spraying	Non spraying			Lab settings
		ulation	synthesis	formulations	formulations			
						Ind. use	Service life	
PEC in surface water	9.23E-03	0.0153	0.0153	0.0938	0.0836	0.0129	0.0109	0.0556
(dissolved) (mg/l)								
PEC in seawater	Not relevant*	1.47E-3	1.47E-3	9.32E-3	8.3E-3	1.23E-3	2.88E-3	5.5E-3
(dissolved) (mg/l)								
PEC in air (total) (mg/m ³)	7.28E-10	3.08E-4	7.2E-10	2.36E-8	7.2E-10	7.2E-10	7.2E-10	7.2E-10
PEC in agricultural soil	6.65E-03	8.68E-3	8.63E-3	0.0403	0.0362	5.37E-3	4.57E-3	0.0226
(total) averaged over 30								
days (mg.kgdwt-1)								
PEC in agricultural soil	6.65E-03	6.77E-3	6.71E-3	0.0164	0.0151	4.07E-3	3.82E-3	9.33E-3
(total) averaged over 180								
days (mg.kgdwt-1)								
PEC in grassland (total)	6.65E-03	6.29E-3	6.17E-3	9.67E-3	9.21E-3	3.7E-3	3.61E-3	5.6E-3
averaged over 180 days								
(mg.kgdwt-1)								
PEC in pore water of	0.012	0.0139	0.0138	0.0336	0.031	8.34E-3	7.84E-3	0.0191
agricultural soils (mg/l)								
PEC in pore water of	0.012	0.0129	0.0127	0.0198	0.0189	7.59E-3	7.41E-3	0.0115
grassland (mg/l)								
PEC in groundwater	0.012	0.0139	0.0138	0.0336	0.031	8.34E-3	7.84E-3	0.0191
under agricultural soil								
(mg/l)								
PEC in sediment (total)	0.0526	0.019	0.019	0.116	0.103	0.016	0.0135	0.0689
(mg.kgdwt-1)								
PEC in seawater	Not relevant*	1.82E-3	1.82E-3	0.0115	0.0103	1.52E-3	3.58E-3	6.81E-3
sediment (total)								

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(mg.kgdwt-1)								_
PEC in STP (mg/l)	1.16	0.0682	0.0682	0.853	0.751	0.0465	0.0267	0.474

^{*} The production site is far from the sea shore (Cologne, Germany) and therefore PEC values for the marine environment are not relevant.



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9 Regional PEC values based on production and use of thiocyanate.

Regional PEC s	All exposure scenarios
Regional PEC in surface water (dissolved) (mg/l)	8.51E-04
Regional PEC in seawater (dissolved) (mg/l)	7.9E-04
Regional PEC in air (total) (mg/m³)	7.22E-10
Regional PEC in agricultural soil (total) (mg.kgdwt-1)	0.0159
Regional PEC in pore water of agricultural soils (mg/l)	0.0287
Regional PEC in natural soil (total) (mg.kgdwt-1)	6.65E-03
Regional PEC in industrial soil (total) (mg.kgdwt-1)	0.138
Regional PEC in sediment (total) (mg.kgdwt-1)	0.0431
Regional PEC in seawater sediment (total) (mg.kgdwt-1)	4.02E-03

10. Risk characterization ratios (environment)

	ES1	ES2	ES3	ES4	ES5	ES6		ES7
	production	Distribution/formulation	Intermediate/	Spraying	Non	Building/		Lab
			synthesis	formulations	spraying	construction	construction	
					formulations			
						Ind. use	Service	
							life	
RCR for the	0.0909	0.118	0.167	0.676	0.528	0.0927	0.0849	0.135
local								
fresh-water								
compartment								
RCR for the	23*	0.112	0.161	0.670	0.523	0.0874	0.150	0.13
local								
marine-water								
compartment								
RCR for the	5.44-E04	8.53E-04	1.19E-03	4.78E-03	3.74E-03	6.73E-04	6.15E-04	9.71E-04
local soil								
compartment								
RCR for the	0.438	1.373E-03	2.92E-03	0.0191	0.0144	5.71E-04	3.22E-04	1.93E-03
sewage								
treatment plant								

^{*} This is the only RCR > 1, but is not relevant, as the production site is not close to the sea.