

# LCID Example 5b - Introduction

## 1) Purpose of the example

The purpose of example 5b is to illustrate how relevant exposure scenario information for lead components would be i) identified in the incoming extended SDS for the raw materials and ii) included into the SDS of the mixture through embedding in section 8 of the main body. The example addresses in particular the following situation:

- The application of the LCID method would lead to the identification of two different lead components for the different routes (here: inhalation and dermal/environment).
- The exposure scenarios for the individual substances had been generated using similar approaches (i.e. format and content largely harmonised).
- The exposure scenarios describe the conditions of use for the substance in a concentration of up to 100%. Concentration adjusted ES for coatings were not available in the extended SDS for the substances (*Note: TRA not designed to differentiate between 100% and 25% content in mixture*).
- The exposure scenarios describe the environmental conditions of use with an unrealistically high daily amount of substance used at site (up to 25 t/d, which equals to more than 100 t/d of a coating). Amount-adjusted ES for typical coating processes were not available in the extended SDS for the substances. The formulator may need to make a linear tonnage adjustment to address conditions of use where no onsite pre-treatment of waste water is required.

This example also illustrates a few challenges that a formulator could face when consolidating OC and RMM for two lead components, even though their exposure scenarios are largely harmonised in structure and content:

- Anticipating the route-specific impact of an OC/RMM is not always straightforward and would in some cases even require knowledge of the exposure assessment tool (and its functioning) that had been used for the CSA. An example for this is the impact of local exhaust ventilation on the dermal exposure in a TRA based assessment. Usually, the formulator receiving an extended SDS for a substance would not know whether the supplier has assumed dermal effectiveness of LEV or not.
- For the environmental lead component identified by the LCID (naphtha), the OC/RMM in the SDS are less stringent (up to 25 t/d and 78% waste water treatment effectiveness) than the OC/RMM for the non-lead component (Mixed xylene; up to 17 t/d at 94% waste water treatment efficiency). This is due to the fact that the LCID disregards a substance without environmental classification at an early stage of the decision tree (identification of the 'relevant component').
- The assumed effectiveness of a good standard of room ventilation slightly differs between the two exposure scenarios. In such case, the formulator needs to decide whether he selects the information relevant for the lead component or the more stringent condition.

In this illustration, most of the pre-existing information in sections 7 and 8 has been left out and replaced by information from the exposure scenarios for the component substances. For skin, eye and respiratory protection, a few textblocks have been retained (in green). The illustration demonstrates, that even if the safe use conditions across the contributing activities show some differences, nevertheless the information can be presented in a structured form within the given section 7/8 format. The only drawback of this presentation is the fact that the measures related to one activity are implemented in two different places.

## 2) Mixture description

### a) Information on the mixture

<b>COMPOSITION:</b>	Naphtha – 20% Mixed xylene <sup>1</sup> – 25%
<b>CLASSIFICATION OF THE MIXTURE:</b>	H226 - Flammable liquid and vapour. H319 - Causes serious eye irritation. H315 - Causes skin irritation. H335 - May cause respiratory irritation. H373 - May cause damage to organs through prolonged or repeated exposure (hearing organs) H412 - Harmful to aquatic life with long lasting effects
<b>USE OF THE MIXTURE:</b>	The mixture is a 1-pack, acrylic modified top coat. It is recommended to apply the paint by airless spray, brush or roller. It is intended for industrial use only.

### b) Hazardous substances entering in the composition of the mixture

Substance	DNEL(s) (systemic-LT) Lowest PNEC(s) [other limit values]	CLP classification
<b>Naphtha, light aromatic (918-668-5)</b>	DNEL inhalation: 150 mg/m <sup>3</sup> DNEL dermal: 25 mg/kg bw/day DNEL oral (population: 11 mg/kg bw/day)  PNEC: not available	Flam. Liq. 3, H226 STOT SE 3, H335 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
<b>Mixed xylene (905-588-0)</b>	DNEL inhalation: 221 mg/m <sup>3</sup>  DNEL dermal: 212 mg/kg BW/day  PNEC (Marine Water): 0.327 mg/L  <i>OEL (Xylene): 220 mg/m<sup>3</sup></i> <i>OEL (Ethylbenzene): 441 mg/m<sup>3</sup></i>	Flam. Liq. 3, H226 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 STOT RE 2, H373 Asp. Tox. 1, H304

<sup>1</sup> The correct substance identity name of this substance under REACH is 'Reaction mass of Xylene and Ethylbenzene'

### 3) Outcome of the LCID methodology

<b>LEAD COMPONENT INHALATION:</b>	Mixed xylene
<b>LEAD COMPONENT DERMAL:</b>	Naphtha, light aromatic
<b>COMPONENT DRIVING HAZARD FOR EYE:</b>	Mixed xylene
<b>RELEVANT LOCAL EFFECT (BEYOND THE EYES):</b>	H335 (STOT SE – respiratory tract): Naphtha, light aromatic and Mixed xylene  H315 (skin irritation): Mixed xylene
<b>LEAD COMPONENT ENVIRONMENT:</b>	Naphtha, light aromatic
<b>LEAD COMPONENT OZONE LAYER HAZARD:</b>	N.A. – because no hazard identified

### 4) Operational conditions (OC) and risk management measures (RMM) relevant for the selected use of the mixture

The OC/RMM below are those reported in the SDS of each individual substance: either in section 8 of the SDS or in the relevant ES attached to the SDS.

The identification and naming of the contributing activities is from the ESs on industrial coating in the extended SDS of the two lead substances. Both ES cover the foreseen activities with the mixture. Contributing activities not relevant for the industrial use of the coating have been eliminated (e.g. PROC 3 activities).

In addition, we identify the relevant OCs and RMMs based on the lead components identified previously for each exposure route. Route specific OC/RMM of the lead component for that route are **indicated in bold**. If incompatible OC/RMM relate to the same activity, the practically more relevant/practical is maintained.

It is assumed that local respiratory effects from Naphtha and the Mixed xylene are prevented by the OC and RMM addressing the long term systematic effect from Naphtha.

In this chapter, we consolidate also the OC and RMM selected for each contributing activity.

At the end, a set of OC/RMM (allocable to all activities) and a list of CA (with or without assignment of PROCs) with few specified OC/RMM remains (i.e. **the one indicated in bold**). This can then be consolidated for inclusion as an annex into the mixture SDS.

	Naphtha (lead component dermal and environment)	Mixed Xylene (lead component inhalation)
Use	Uses in Coatings: at industrial site	Uses in Coatings: Industrial - Covers the use in coatings (paints, inks, adhesives, etc.) including exposures during use (including materials receipt, storage, preparation and transfer from bulk and semi-bulk, application by spray, roller, spreader, dip, flow, fluidised bed on production lines and film formation) and equipment cleaning, maintenance and associated laboratory activities
OC and RMM per contributing activity		
All activities	<p><b>Concentration of substance in product: Up to 100%</b>  <b>Frequency and duration of use: 8 hours/day (no restriction)</b>  <b>Assumes use not &gt; 20°C above ambient temperature (except PROC2)</b>  <b>Assumes a good basic standard of occupational hygiene is implemented</b>  <u>Respiratory protection<sup>1</sup>:</u></p> <ul style="list-style-type: none"> <li>- Required, if exposure limit is exceeded (e.g. OEL).</li> <li>- In case of brief exposure or low pollution use breathing filter apparatus.</li> <li>- In case of intensive or longer exposure use breathing apparatus that is independent of circulating air.</li> <li>- Recommended Filter type: Combination filter A-P2</li> </ul> <p><b><u>Hand protection<sup>1</sup>:</u></b></p> <ul style="list-style-type: none"> <li>- <b>Protective gloves. The following materials are suitable: Material: Nitrile rubber</b></li> <li>- <b>Break through time : &gt; 480 min</b></li> <li>- <b>Glove thickness : 0,4 mm</b></li> </ul> <p><u>Eye protection<sup>1</sup>:</u>  Advice : Tightly fitting safety goggles</p> <p><b><u>Skin and body protection<sup>1</sup>:</u></b>  <b>Flame retardant antistatic protective clothing</b></p>	<p><b>Concentration of substance in product: Up to 100%</b>  <b>Frequency and duration of use: 8 hours/day (no restriction)</b>  <del>Assumes use not &gt; 20°C above ambient temperature<sup>2</sup></del>  <b>Assumes a good basic standard of occupational hygiene is implemented</b>  <u>Exposure control and personal protection<sup>1</sup>:</u></p> <p>Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately.</p> <p>Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. Other skin protection measures such as impervious suits and face shields may be required during high dispersion activities which are likely to lead to substantial aerosol release, e.g. spraying.</p> <p><b>Wear goggles for use against liquids and gas. Wear full face shield if splashes are likely to occur. Approved to EU Standard EN166.</b></p> <p>Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. EN374) made from the following materials may provide suitable chemical protection. Longer term protection: Viton. Incidental contact/Splash protection: Nitrile rubber.</p> <p>For continuous contact we recommend gloves with breakthrough time of more than 240 minutes with preference for &gt; 480 minutes where suitable gloves can be identified.</p> <p>Glove thickness should be typically greater than 0.35 mm</p>

	Naphtha (lead component dermal and environment)	Mixed Xylene (lead component inhalation)
		Wear chemical resistant gloves/gauntlets and boots. Where risk of splashing, also wear an apron. Wear antistatic and flame retardant clothing.
PROC1: Storage	<b>Store substance within a closed system</b>	<b>Store substance within a closed system.</b>
PROC2: Film formation - force drying, stoving and other technologies.	<b>Film formation – force drying (50-100°C). Stoving (&gt;100°C). UV/EB radiation curing</b> Operation is carried out at elevated temperature (> 20°C above ambient temperature).	<b>Handle substance within a closed system.</b> <b>Provide extraction ventilation at points where emissions occur.</b>
<del>PROC3: Use in closed batch process (synthesis or formulation) <sup>2</sup></del>	-	<del>General exposures (closed systems)</del>
PROC4: Film formation – air drying	Provide extract ventilation to points where emissions occur <sup>4</sup>	<b>Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).</b>
PROC5: Preparation of material for application. Mixing operations (open systems)	Provide a good standard of controlled ventilation <sup>4</sup> (10 to 15 air changes per hour)	<b>Provide a good standard of general or controlled ventilation (5 to 15 air changes per hour).</b>
Mixing operation (closed system)	-	<b>Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).</b>
PROC7: Spraying Manual	Provide enhanced general ventilation by mechanical means. Wear a respirator conforming to EN140 with Type A filter or better	<b>Provide a good standard of general or controlled ventilation (5 to 15 air changes per hour).</b> <b>Wear a respirator conforming to EN140 with Type A filter or better.</b>
PROC7: Spraying (automatic/robotic)	Carry out in a vented booth provided with laminar airflow	<b>Carry out in a vented booth provided with laminar airflow.</b>
PROC8a/PROC8b : Material transfers	Provide a good standard of controlled ventilation (10 to 15 air changes per hour)	<b>Ensure material transfers are under containment or extract ventilation.</b>
PROC28: Equipment cleaning and maintenance	Drain down and flush system prior to equipment opening or maintenance.	<b>Drain down system prior to equipment opening or maintenance.</b>
PROC10: Roller, spreader, flow application	Provide a good standard of controlled ventilation (10 to 15 air changes per hour)	<b>Provide extraction ventilation at points where emissions occur.</b>
PROC13: Dipping, immersion and pouring	Provide a good standard of controlled ventilation (10 to 15 air changes per hour)	<b>Provide a good standard of general or controlled ventilation (5 to 15 air changes per hour).</b>
PROC9: Material transfers Drum/batch transfers Transfer from/pouring from containers	Provide a good standard of controlled ventilation (10 to 15 air changes per hour) If above technical/organisational control measures are not feasible, then adopt following PPE: Wear a respirator conforming to EN140 with Type A filter or better	<b>Provide a good standard of general or controlled ventilation (5 to 15 air changes per hour).</b>
PROC14: Production of	Provide a good standard of controlled ventilation	<b>Provide a good standard of general or controlled</b>

	Naphtha (lead component dermal and environment)	Mixed Xylene (lead component inhalation)
preparations or articles by tableting, compression, extrusion, pelettisation	(10 to 15 air changes per hour)	<b>ventilation (5 to 15 air changes per hour).</b>
PROC15 : Use as laboratory reagent		
ERC4 : Industrial use of processing aids in processes and products, not becoming part of articles	<b>Daily amount used: 25 T/day<sup>3</sup></b> <b>Prevent discharge of undissolved substance to or recover from wastewater</b> <b>Treat air emissions to provide a typical removal efficiency of 90%</b> <b>Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency ≥77.7%</b> <b>Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed</b>	Daily amount used: 17 T/day Prevent discharge of undissolved substance to or recover from wastewater Treat air emissions to provide a typical removal efficiency of 90% Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency ≥93.6% Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed

Note

1: This information was available in sections 7 and 8 of the substance SDS

2: This OC / RMM is conflicting with other OC / RMM. It has therefore been removed during the consolidation.

3: The daily amount for safe use of the lead component is less stringent than the daily amount of the other component. One may wonder if in this specific situation, the lowest tonnage should be considered for safe use of the substance.

4: It is not possible to know if the local exhaust ventilation is an OC relevant for the dermal route, as the source SDS does not contain any information on the exposure estimates calculation. The proper selection of relevant OC/RMM relies therefore on expert judgement. In this case, it is likely that the local exhaust ventilation refers to the inhalation route only.

## Example 5b - Safety Data Sheet content

Extract of relevant safe use information derived by application of  
the LCID methodology

# SAFETY DATA SHEET

My Super Paint



## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

**Product name** : My Super Paint

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

**Product description** : Coatings and paints, thinners, paint removers (PC9a)

### 1.3 Details of the supplier of the safety data sheet

My company, Maalitie 1, FI-00370 HELSINKI, FINLAND. Tel. +358 9 000 000.

**e-mail address of person responsible for this SDS** : prod-safe@mycompany.com

#### National contact

My company, Maalitie 1, FI-00370 HELSINKI, FINLAND. Tel. +358 9 000 000

### 1.4 Emergency telephone number

**Telephone number** : +358 9 000 000; Opening hours: MON-FRI, 7am – 6pm.

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Mixture

#### Classification according to Regulation (EC) No. 1272/2008 (CLP/GHS)

Flam. Liq. 3, H226

Skin Irrit. 2, H315

Eye Irrit. 2, H319

STOT SE 3, H335

STOT RE 2, H373

Aquatic Chronic 3, H412

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

**Hazard pictograms** :**Signal word** : Warning

**Hazard statements** :

- H226 - Flammable liquid and vapour.
- H319 - Causes serious eye irritation.
- H315 - Causes skin irritation.
- H335 - May cause respiratory irritation.
- H373 - May cause damage to organs through prolonged or repeated exposure.
- H412 - Harmful to aquatic life with long lasting effects.

#### Precautionary statements

**General** : Not applicable.My Super Paint **Version** : 3**Date of issue**/**Date of revision**: 18/04/2018 **Date of previous issue**

: 22/06/2016

**Label No** : XXXX**Page 1 of 10**



## SECTION 2: Hazards identification

<b>Prevention</b>	: P280 - Wear protective gloves. Wear eye or face protection. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P273 - Avoid release to the environment.
<b>Response</b>	: P304 + P312 - IF INHALED: Call a POISON CENTER or physician if you feel unwell. P303 + P353 - IF ON SKIN (or hair): Rinse skin with water or shower.
<b>Storage</b>	: P403 - Store in a well-ventilated place.
<b>Disposal</b>	: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
<b>Hazardous ingredients</b>	: Solvent naphtha (petroleum), light aromatic Mixed xylene
<b>Supplemental label elements</b>	:
<b>Annex XVII - Restrictions</b>	:

### 2.3 Other hazards

**Other hazards which do not result in classification** : None known.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures : Mixture

Product/ingredient name	Identifiers	%	Regulation (EC) No. 1272/2008 [CLP]	Type
Solvent naphtha (petroleum), light Aromatic	EC: 918-668-5 CAS: 64742-95-6 Index: 649-356-00-4 Registration: 01-2119455851-35-XXXX	20	Flam. Liq. 3, H226 STOT SE 3, H335 (Respiratory tract irritation) STOT SE 3, H336 (Narcotic effects) Asp. Tox. 1, H304 Aquatic Chronic 2, H411	[1]
Mixed xylene	EC: 905-588-0 CAS: 1330-20-7 Registration: 01-2119488216-XX-XXXX	25	Flam. Liq. 3, H226 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 (Respiratory tract irritation) STOT RE 2, H373 (Hearing organs) Asp. Tox. 1, H304 <b>See Section 16 for the full text of the H statements declared above.</b>	[1] [2]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

#### Type

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

[3] Substance meets the criteria for PBT according to Regulation EC No 1907/2006, Annex XIII

[4] Substance meets the criteria for vPvB according to Regulation EC No 1907/2006, Annex XIII

[5] Substance of equivalent concern

Occupational exposure limits, if available, are listed in Section 8.

## SECTION 4: First aid measures

## SECTION 5: Firefighting measures

## SECTION 6: Accidental release measures

## SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 7.1 Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not breathe vapor or mist. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

### 7.2 Conditions for safe storage, including any incompatibilities

### 7.3 Specific end use(s)

- Recommendations** : Not available.
- Industrial sector specific solutions** : Not available.

## SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

### 8.1 Control parameters

#### Occupational exposure limits

Xylene

**EH40/2005 WELs (United Kingdom (UK), 12/2011). Absorbed through skin.**

STEL: 441 mg/m<sup>3</sup> 15 minutes.

TWA: 50 ppm 8 hours.

TWA: 220 mg/m<sup>3</sup> 8 hours.

STEL: 100 ppm 15 minutes.

Ethylbenzene

**EH40/2005 WELs (United Kingdom (UK), 12/2011). Absorbed through skin.**

STEL: 552 mg/m<sup>3</sup> 15 minutes.

STEL: 125 ppm 15 minutes.

TWA: 100 ppm 8 hours.

TWA: 441 mg/m<sup>3</sup> 8 hours.

## SECTION 8: Exposure controls/personal protection

**Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

### DNELs/DMELs components:

	WORKER
Solvent Naphtha (light, aromatic):	
DNEL inhalation long term/systemic:	150 mg/m <sup>3</sup>
DNEL dermal long term/systemic:	25 mg/kg BW/day
Mixed xylene:	
DNEL inhalation long term/systemic:	221 mg/m <sup>3</sup>
DNEL inhalation acute/systemic:	442 mg/m <sup>3</sup>
DNEL inhalation long term/local:	221 mg/m <sup>3</sup>
DNEL inhalation acute/local:	442 mg/m <sup>3</sup>
DNEL dermal long term/systemic:	212 mg/kg BW/day

### PNECs:

Solvent Naphtha (light aromatic):	Not available
Mixed xylene:	

### 8.2.0 Operational conditions under which the exposure controls apply [note: Not present in Annex II]

- Covers use up to 8.0 h/day
- Room temperature. Except for force drying (up to 100 C) and stoving (> 100 C)

### 8.2.1 Appropriate engineering controls

Handle substance within a closed system; Provide extract ventilation to points where emissions occur.	▪ Film formation - force drying (PROC 2)
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).	▪ Film formation - air drying (PROC 4) ▪ Preparation of material by mixing [Closed] (PROC 5)
Provide a good standard of controlled ventilation (5 to 15 air changes per hour).	▪ Preparation of material by mixing [open] (PROC 5) ▪ Spraying; Manual (PROC 7) ▪ Roller, spreader, flow application (PROC 10) ▪ Dipping, immersion and pouring (PROC 13) ▪ Drum/container/batch transfers by pouring (PROC 9)
Ensure material transfers are under containment or extract ventilation.	▪ Drum/container/batch transfers by pouring (PROC 8a) ▪ Other material transfers (PROC 8b)
	▪ Spraying; Automated task (PROC 7)

### 8.2.2 Individual protection measures

#### 8.2.2.2 (a) Eye/face protection

Use suitable eye protection

Safety eyewear complying with EU Standard EN166 should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. Wear goggles for use against liquids and gas. Wear full face shield if splashes are likely to occur.<sup>2</sup>

<sup>2</sup> Text in green is copied from the existing text in section 7/8 of the SDS.

### 8.2.2. (b) Skin protection

Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training;

Recommendations: > 8 hours (breakthrough time); Nitrile rubber gloves, thickness > 0.4 mm; VitonR > 0.3 mm

If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands;

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

### 8.2.2 (c) Respiratory protection

Wear suitable respiratory protection; Inhalation - minimum efficiency of 90.0 %; Respirator conforming to EN140 with Type A filter or better. Spray application Filter type: AP Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.	Spraying; Manual (PROC 7)
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### 8.2.3 Environmental exposure controls

- Daily amount per site <= 125 T/day of the mixture
- Treat air emissions to provide a typical removal efficiency of 90%
- Prevent discharge of undissolved substance to or recover from onsite wastewater; Consider technical advances and process upgrades (including automation) for the elimination of releases.
- Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency  $\geq 77.7\%$
- Do not apply industrial sludge to natural soils; Sewage sludge should be incinerated, contained or reclaimed.

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