

# SAFETY DATA SHEET



8-214 HS Scratch Resistant Clear Coat

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

### 1.1 Product identifier

**Product name** : 8-214 HS Scratch Resistant Clear Coat  
**Product code** : 8-214  
**Product description** : Not available.  
**Product type** : Liquid.

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

#### Identified uses

Professional spray painting, near-industrial setting  
 Use in coatings - Clearcoat

#### Uses advised against

Not applicable.

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

Valspar b.v.  
 Zuiveringweg 89  
 8243 PE Lelystad  
 The Netherlands  
 tel: +31 (0)320 292200

**e-mail address of person responsible for this SDS** : msds@valspar.com

#### National contact

Sherwin-Williams UK Limited  
 Avenue One Station Lane, Witney, United Kingdom  
 Oxfordshire OX28 4XR

### 1.4 Emergency telephone number

#### National advisory body/Poison Centre

**Telephone number** : UK: 0-800-014-8126  
 CALL: +(44)-870-8200418 (Hours of operation - 24 hours)

#### Supplier

**Telephone number** : Call: +31 (0)320 292200 (8:30AM - 5PM)

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Mixture

#### Classification according to UK CLP/GHS

Flam. Liq. 3, H226  
 Skin Sens. 1, H317  
 STOT SE 3, H336  
 Aquatic Chronic 3, H412

The product is classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

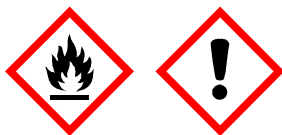
See Section 16 for the full text of the H statements declared above.

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

### 2.2 Label elements

## SECTION 2: Hazards identification

**Hazard pictograms** :



**Signal word** :

Warning

**Hazard statements** :

Flammable liquid and vapour.  
 May cause an allergic skin reaction.  
 May cause drowsiness or dizziness.  
 Harmful to aquatic life with long lasting effects.

**Precautionary statements**

**Prevention** :

Wear protective gloves. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid release to the environment. Avoid breathing vapour.

**Response** :

IF INHALED: Call a POISON CENTER or doctor if you feel unwell. Take off contaminated clothing and wash it before reuse. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or attention.

**Storage** :

Store in a well-ventilated place. Keep container tightly closed.

**Disposal** :

Dispose of contents and container in accordance with all local, regional, national and international regulations.

**Supplemental label elements** :

Not applicable.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** :

Not applicable.

**Special packaging requirements**

**Containers to be fitted with child-resistant fastenings** :

Not applicable.

**Tactile warning of danger** :

Not applicable.

### 2.3 Other hazards

**Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII** :

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Other hazards which do not result in classification** :

None known.

## SECTION 3: Composition/information on ingredients

**3.2 Mixtures** :

Mixture

Product/ingredient name	Identifiers	%	Classification	Type
n-butyl acetate	REACH #: 01-2119485493-29 EC: 204-658-1 CAS: 123-86-4 Index: 607-025-00-1	≥25 - ≤50	Flam. Liq. 3, H226 STOT SE 3, H336 EUH066	[1] [2]
Solvent naphtha (petroleum), light arom.	REACH #: 01-2119455851-35 EC: 265-199-0 CAS: 64742-95-6	≤10	Flam. Liq. 3, H226 STOT SE 3, H335 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 EUH066	[1]
xylene	REACH #:	<10	Flam. Liq. 3, H226	[1] [2]

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**SECTION 3: Composition/information on ingredients**

2-methoxy-1-methylethyl acetate	01-2119488216-32 EC: 215-535-7 CAS: 1330-20-7 Index: 601-022-00-9 REACH #: 01-2119475791-29 EC: 203-603-9 CAS: 108-65-6 Index: 607-195-00-7	≤3	Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315  Flam. Liq. 3, H226 STOT SE 3, H336	[1] [2]
ethylbenzene	REACH #: 01-2119489370-35 EC: 202-849-4 CAS: 100-41-4 Index: 601-023-00-4	≤3	Flam. Liq. 2, H225 Acute Tox. 4, H332 STOT RE 2, H373 (hearing organs) Asp. Tox. 1, H304	[1] [2]
2-butoxyethyl acetate	REACH #: 01-2119475112-47 EC: 203-933-3 CAS: 112-07-2 Index: 607-038-00-2	<1	Acute Tox. 4, H312 Acute Tox. 4, H332	[1] [2]
Poly(oxy-1,2-ethanediyl), α-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-ω-hydroxy-	REACH #: 01-0000015075-76 CAS: 104810-48-2	<1	Skin Sens. 1A, H317 Aquatic Chronic 2, H411	[1]
bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	REACH #: 01-2119537297-32 EC: 255-437-1 CAS: 41556-26-7	≤0.73	Skin Sens. 1A, H317 Repr. 2, H361 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1]
Poly(oxy-1,2-ethanediyl), α-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-ω-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropoxy]-1-methoxy-2-propanol	REACH #: 01-0000015075-76 CAS: 104810-47-1	<1	Skin Sens. 1A, H317 Aquatic Chronic 2, H411	[1]
methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	REACH #: 01-2119457435-35 EC: 203-539-1 CAS: 107-98-2 Index: 603-064-00-3	<1	Flam. Liq. 3, H226 STOT SE 3, H336	[1] [2]
methyl methacrylate	EC: 280-060-4 CAS: 82919-37-7	≤0.24	Skin Sens. 1A, H317 Repr. 2, H361 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1]
toluene	REACH #: 01-2119452498-28 EC: 201-297-1 CAS: 80-62-6 Index: 607-035-00-6	≤0.1	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Skin Sens. 1, H317 STOT SE 3, H335	[1] [2]
diocetyl tin dilaurate	REACH #: 01-2119471310-51 EC: 203-625-9 CAS: 108-88-3 Index: 601-021-00-3	≤0.1	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361d STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304	[1] [2]
	REACH #: 01-2119979527-19 EC: 222-883-3 CAS: 3648-18-8 Index: 050-031-00-9	≤0.1	Repr. 1B, H360D STOT RE 1, H372 (immune system)	[1] [2]

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### SECTION 3: Composition/information on ingredients

cumene	EC: 202-704-5 CAS: 98-82-8 Index: 601-024-00-X	<0.1	Flam. Liq. 3, H226 Carc. 1B, H350 STOT SE 3, H335 Asp. Tox. 1, H304 Aquatic Chronic 2, H411	[1] [2]
benzene	REACH #: 01-2119447106-44 EC: 200-753-7 CAS: 71-43-2 Index: 601-020-00-8	<0.1	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Muta. 1B, H340 Carc. 1A, H350 STOT RE 1, H372 Asp. Tox. 1, H304	[1] [2]
propylene oxide	EC: 200-879-2 CAS: 75-56-9 Index: 603-055-00-4	<0.1	Flam. Liq. 1, H224 Acute Tox. 4, H302 Acute Tox. 3, H311 Acute Tox. 3, H331 Eye Irrit. 2, H319 Muta. 1B, H340 Carc. 1B, H350 STOT SE 3, H335	[1] [2]
hydrogen chloride	EC: 231-595-7 CAS: 7647-01-0 Index: 017-002-00-2	<0.1	Press. Gas (Comp.), H280 Acute Tox. 3, H331 Skin Corr. 1A, H314 Eye Dam. 1, H318	[1] [2]
formaldehyde	REACH #: 01-2119488953-20 EC: 200-001-8 CAS: 50-00-0 Index: 605-001-00-5	<0.1	Acute Tox. 3, H301 Acute Tox. 3, H311 Acute Tox. 2, H330 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Muta. 2, H341 Carc. 1B, H350 STOT SE 3, H335	[1] [2]
ethylene oxide	EC: 200-849-9 CAS: 75-21-8 Index: 603-023-00-X	<0.1	Flam. Gas 1A, H220 Press. Gas (Comp.), H280 Acute Tox. 3, H301 Acute Tox. 3, H331 Skin Corr. 1, H314 Eye Dam. 1, H318 Muta. 1B, H340 Carc. 1B, H350 Repr. 1B, H360Fd STOT SE 3, H335 STOT SE 3, H336 STOT RE 1, H372 (nervous system) <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

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

**SECTION 4: First aid measures****4.1 Description of first aid measures**

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

**4.2 Most important symptoms and effects, both acute and delayed****Over-exposure signs/symptoms**

- Eye contact** : No specific data.
- Inhalation** : Adverse symptoms may include the following:  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness
- Ingestion** : No specific data.

**4.3 Indication of any immediate medical attention and special treatment needed**

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.

**SECTION 5: Firefighting measures****5.1 Extinguishing media**

- Suitable extinguishing media** : Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

## SECTION 5: Firefighting measures

### 5.2 Special hazards arising from the substance or mixture

- Hazards from the substance or mixture** : Flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapour/gas is heavier than air and will spread along the ground. Vapours may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
- Hazardous combustion products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide

### 5.3 Advice for firefighters

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

### 6.2 Environmental precautions

- : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

### 6.3 Methods and material for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

### 6.4 Reference to other sections

- : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

## 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). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. 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

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidising materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

### Seveso Directive - Reporting thresholds

#### Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
P5c	5000 tonne	50000 tonne

### 7.3 Specific end use(s)

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

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

Product/ingredient name	Exposure limit values
n-butyl acetate	<b>EH40/2005 WELs (United Kingdom (UK), 1/2020).</b> STEL: 966 mg/m <sup>3</sup> 15 minutes. STEL: 200 ppm 15 minutes. TWA: 724 mg/m <sup>3</sup> 8 hours. TWA: 150 ppm 8 hours.
xylene	<b>EH40/2005 WELs (United Kingdom (UK), 1/2020). [xylene, o-,m-, p- or mixed isomers] Absorbed through skin.</b> STEL: 441 mg/m <sup>3</sup> , 0 times per shift, 15 minutes. STEL: 100 ppm, 0 times per shift, 15 minutes. TWA: 220 mg/m <sup>3</sup> , 0 times per shift, 8 hours. TWA: 50 ppm, 0 times per shift, 8 hours.
2-methoxy-1-methylethyl acetate	<b>EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin.</b> STEL: 548 mg/m <sup>3</sup> 15 minutes.

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ethylbenzene	<p>TWA: 50 ppm 8 hours.                      TWA: 274 mg/m<sup>3</sup> 8 hours.                      STEL: 100 ppm 15 minutes.  <b>EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin.</b>                      STEL: 552 mg/m<sup>3</sup> 15 minutes.                      STEL: 125 ppm 15 minutes.                      TWA: 441 mg/m<sup>3</sup> 8 hours.                      TWA: 100 ppm 8 hours.</p>
2-butoxyethyl acetate	<p><b>EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin.</b>                      STEL: 50 ppm 15 minutes.                      TWA: 20 ppm 8 hours.                      STEL: 332 mg/m<sup>3</sup> 15 minutes.                      TWA: 133 mg/m<sup>3</sup> 8 hours.</p>
1-methoxy-2-propanol	<p><b>EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin.</b>                      STEL: 560 mg/m<sup>3</sup> 15 minutes.                      STEL: 150 ppm 15 minutes.                      TWA: 375 mg/m<sup>3</sup> 8 hours.                      TWA: 100 ppm 8 hours.</p>
methyl methacrylate	<p><b>EH40/2005 WELs (United Kingdom (UK), 1/2020).</b>                      STEL: 416 mg/m<sup>3</sup> 15 minutes.                      STEL: 100 ppm 15 minutes.                      TWA: 208 mg/m<sup>3</sup> 8 hours.                      TWA: 50 ppm 8 hours.</p>
toluene	<p><b>EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin.</b>                      STEL: 384 mg/m<sup>3</sup> 15 minutes.                      STEL: 100 ppm 15 minutes.                      TWA: 191 mg/m<sup>3</sup> 8 hours.                      TWA: 50 ppm 8 hours.</p>
dioctyltin dilaurate	<p><b>EH40/2005 WELs (United Kingdom (UK), 1/2020). [tin compounds, organic, except cyhexatin (ISO) as Sn] Absorbed through skin.</b>                      STEL: 0.2 mg/m<sup>3</sup>, (as Sn) 15 minutes.                      TWA: 0.1 mg/m<sup>3</sup>, (as Sn) 8 hours.</p>
cumene	<p><b>EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin.</b>                      STEL: 250 mg/m<sup>3</sup> 15 minutes.                      STEL: 50 ppm 15 minutes.                      TWA: 125 mg/m<sup>3</sup> 8 hours.                      TWA: 25 ppm 8 hours.</p>
benzene	<p><b>EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin.</b>                      TWA: 1 ppm 8 hours.                      TWA: 3.25 mg/m<sup>3</sup> 8 hours.</p>
propylene oxide	<p><b>EH40/2005 WELs (United Kingdom (UK), 1/2020).</b>                      TWA: 1 ppm 8 hours.                      TWA: 2.4 mg/m<sup>3</sup> 8 hours.</p>
hydrogen chloride	<p><b>EH40/2005 WELs (United Kingdom (UK), 1/2020).</b>                      STEL: 8 mg/m<sup>3</sup> 15 minutes. Form: (gas and aerosol mists)                      STEL: 5 ppm 15 minutes. Form: (gas and aerosol mists)                      TWA: 2 mg/m<sup>3</sup> 8 hours. Form: (gas and aerosol mists)                      TWA: 1 ppm 8 hours. Form: (gas and aerosol mists)</p>
formaldehyde	<p><b>EH40/2005 WELs (United Kingdom (UK), 1/2020).</b>                      STEL: 2.5 mg/m<sup>3</sup> 15 minutes.                      STEL: 2 ppm 15 minutes.                      TWA: 2.5 mg/m<sup>3</sup> 8 hours.                      TWA: 2 ppm 8 hours.</p>
ethylene oxide	<p><b>EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin.</b>                      TWA: 1 ppm 8 hours.                      TWA: 1.8 mg/m<sup>3</sup> 8 hours.</p>



**SECTION 8: Exposure controls/personal protection**

**Recommended monitoring procedures** : Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

**DNELs/DMELs**

Product/ingredient name	Type	Exposure	Value	Population	Effects
n-butyl acetate	DNEL	Long term Inhalation	35.7 mg/m <sup>3</sup>	General population [Consumers]	Local
	DNEL	Short term Inhalation	300 mg/m <sup>3</sup>	General population [Consumers]	Local
	DNEL	Short term Dermal	6 mg/kg bw/day	General population	Systemic
	DNEL	Long term Oral	2 mg/kg bw/day	General population [Consumers]	Systemic
	DNEL	Short term Oral	2 mg/kg bw/day	General population [Consumers]	Systemic
	DNEL	Long term Inhalation	300 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Short term Inhalation	600 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Inhalation	300 mg/m <sup>3</sup>	Workers	Local
	DNEL	Short term Inhalation	600 mg/m <sup>3</sup>	Workers	Local
	DNEL	Long term Dermal	11 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Dermal	11 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Oral	2 mg/kg bw/day	General population	Systemic
	DNEL	Short term Oral	2 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	3.4 mg/kg bw/day	General population	Systemic
	DNEL	Short term Dermal	6 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	7 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Dermal	11 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	12 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Inhalation	35.7 mg/m <sup>3</sup>	General population	Local
	DNEL	Long term Inhalation	48 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Short term Inhalation	300 mg/m <sup>3</sup>	General population	Local
	DNEL	Short term Inhalation	300 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Inhalation	300 mg/m <sup>3</sup>	Workers	Local
DNEL	Short term Inhalation	600 mg/m <sup>3</sup>	Workers	Local	
DNEL	Short term Inhalation	600 mg/m <sup>3</sup>	Workers	Systemic	
Solvent naphtha (petroleum), light arom.	DNEL	Long term Dermal	11 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	32 mg/m <sup>3</sup>	General population	Systemic

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xylene	DNEL	Long term Oral	11 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Dermal	25 mg/kg bw/day	Workers	Systemic	
	DNEL	Long term Inhalation	150 mg/m <sup>3</sup>	Workers	Systemic	
	DNEL	Long term Inhalation	0.41 mg/m <sup>3</sup>	General population	Systemic	
	DNEL	Long term Inhalation	1.9 mg/m <sup>3</sup>	Workers	Systemic	
	DNEL	Long term Inhalation	178.57 mg/m <sup>3</sup>	General population	Local	
	DNEL	Short term Inhalation	640 mg/m <sup>3</sup>	General population	Local	
	DNEL	Long term Inhalation	837.5 mg/m <sup>3</sup>	Workers	Local	
	DNEL	Short term Inhalation	1066.67 mg/m <sup>3</sup>	Workers	Local	
	DNEL	Short term Inhalation	1152 mg/m <sup>3</sup>	General population	Systemic	
	DNEL	Short term Inhalation	1286.4 mg/m <sup>3</sup>	Workers	Systemic	
	DNEL	Short term Inhalation	174 mg/m <sup>3</sup>	General population [Consumers]	Local	
	DNEL	Short term Inhalation	174 mg/m <sup>3</sup>	General population [Consumers]	Systemic	
	DNEL	Long term Oral	12.5 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Inhalation	65.3 mg/m <sup>3</sup>	General population	Local	
	DNEL	Long term Inhalation	65.3 mg/m <sup>3</sup>	General population	Systemic	
	DNEL	Long term Dermal	125 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Dermal	212 mg/kg bw/day	Workers	Systemic	
	2-methoxy-1-methylethyl acetate	DNEL	Long term Inhalation	221 mg/m <sup>3</sup>	Workers	Local
		DNEL	Long term Inhalation	221 mg/m <sup>3</sup>	Workers	Systemic
DNEL		Short term Inhalation	260 mg/m <sup>3</sup>	General population	Local	
DNEL		Short term Inhalation	260 mg/m <sup>3</sup>	General population	Systemic	
DNEL		Short term Inhalation	442 mg/m <sup>3</sup>	Workers	Local	
DNEL		Short term Inhalation	442 mg/m <sup>3</sup>	Workers	Systemic	
DNEL		Long term Dermal	796 mg/kg bw/day	Workers	Systemic	
DNEL		Long term Inhalation	33 mg/m <sup>3</sup>	General population	Local	
DNEL		Long term Inhalation	33 mg/m <sup>3</sup>	General population	Systemic	
DNEL		Long term Oral	36 mg/kg bw/day	General population	Systemic	
DNEL		Long term Inhalation	275 mg/m <sup>3</sup>	Workers	Systemic	
DNEL		Long term Dermal	320 mg/kg bw/day	General population	Systemic	
DNEL	Short term Inhalation	550 mg/m <sup>3</sup>	Workers	Local		

**SECTION 8: Exposure controls/personal protection**

ethylbenzene	DNEL	Long term Dermal	796 mg/kg bw/day	Workers	Systemic	
	DMEL	Long term Inhalation	442 mg/m <sup>3</sup>	Workers	Local	
	DMEL	Short term Inhalation	884 mg/m <sup>3</sup>	Workers	Systemic	
	DNEL	Long term Oral	1.6 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Inhalation	15 mg/m <sup>3</sup>	General population	Systemic	
	DNEL	Long term Inhalation	77 mg/m <sup>3</sup>	Workers	Systemic	
	DNEL	Long term Dermal	180 mg/kg bw/day	Workers	Systemic	
	DNEL	Short term Inhalation	293 mg/m <sup>3</sup>	Workers	Local	
2-butoxyethyl acetate	DNEL	Short term Inhalation	499 mg/m <sup>3</sup>	General population	Systemic	
	DNEL	Short term Inhalation	775 mg/m <sup>3</sup>	Workers	Systemic	
	DNEL	Long term Inhalation	80 mg/m <sup>3</sup>	General population	Systemic	
	DNEL	Long term Inhalation	133 mg/m <sup>3</sup>	Workers	Systemic	
	DNEL	Short term Inhalation	200 mg/m <sup>3</sup>	General population	Local	
	DNEL	Long term Oral	8.6 mg/kg bw/day	General population	Systemic	
	DNEL	Short term Oral	36 mg/kg bw/day	General population	Systemic	
	DNEL	Short term Dermal	72 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Dermal	102 mg/kg bw/day	General population	Systemic	
	DNEL	Short term Dermal	120 mg/kg bw/day	Workers	Systemic	
	DNEL	Long term Dermal	169 mg/kg bw/day	Workers	Systemic	
	DNEL	Short term Inhalation	333 mg/m <sup>3</sup>	Workers	Local	
	Poly(oxy-1,2-ethanediyl), α-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-ω-hydroxy-	DNEL	Long term Inhalation	0.35 mg/m <sup>3</sup>	Workers	Systemic
		DNEL	Long term Dermal	0.5 mg/kg bw/day	Workers	Systemic
		DNEL	Long term Inhalation	0.085 mg/m <sup>3</sup>	General population [Consumers]	Systemic
		DNEL	Long term Dermal	0.25 mg/kg bw/day	General population [Consumers]	Systemic
DNEL		Long term Oral	0.025 mg/kg bw/day	General population [Consumers]	Systemic	
DNEL		Long term Oral	0.025 mg/kg bw/day	General population	Systemic	
DNEL		Long term Dermal	0.025 mg/kg bw/day	General population	Systemic	
DNEL		Long term Inhalation	0.085 mg/m <sup>3</sup>	General population	Systemic	
DNEL		Long term Dermal	0.25 mg/kg bw/day	Workers	Systemic	
DNEL		Long term	0.35 mg/m <sup>3</sup>	Workers	Systemic	

**SECTION 8: Exposure controls/personal protection**

bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	DNEL	Inhalation Long term	3.53 mg/m <sup>3</sup>	Workers	Systemic	
	DNEL	Inhalation Long term Dermal	2 mg/kg bw/day	Workers	Systemic	
	DNEL	Inhalation Long term	0.87 mg/m <sup>3</sup>	General population [Consumers]	Systemic	
	DNEL	Dermal Long term	1 mg/kg bw/day	General population [Consumers]	Systemic	
	DNEL	Oral Long term	0.5 mg/kg bw/day	General population [Consumers]	Systemic	
Poly(oxy-1,2-ethanediyl), α-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-ω-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropoxy]-	DNEL	Inhalation Long term	0.35 mg/m <sup>3</sup>	Workers	Systemic	
	DNEL	Dermal Long term	0.5 mg/kg bw/day	Workers	Systemic	
	DNEL	Inhalation Long term	0.085 mg/ m <sup>3</sup>	General population [Consumers]	Systemic	
	DNEL	Dermal Long term	0.25 mg/ kg bw/day	General population [Consumers]	Systemic	
	DNEL	Oral Long term	0.025 mg/ kg bw/day	General population [Consumers]	Systemic	
1-methoxy-2-propanol	DNEL	Dermal Long term	51 mg/kg bw/day	Workers	Systemic	
	DNEL	Oral Long term	33 mg/kg bw/day	General population	Systemic	
	DNEL	Inhalation Long term	43.9 mg/m <sup>3</sup>	General population	Systemic	
	DNEL	Dermal Long term	78 mg/kg bw/day	General population	Systemic	
	DNEL	Dermal Long term	183 mg/kg bw/day	Workers	Systemic	
	DNEL	Inhalation Long term	369 mg/m <sup>3</sup>	Workers	Systemic	
	DNEL	Inhalation Short term	553.5 mg/ m <sup>3</sup>	Workers	Local	
	DNEL	Inhalation Short term	553.5 mg/ m <sup>3</sup>	Workers	Systemic	
	methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	DNEL	Inhalation Long term	3.53 mg/m <sup>3</sup>	Workers	Systemic
		DNEL	Dermal Long term	2 mg/kg bw/day	Workers	Systemic
DNEL		Inhalation Long term	0.87 mg/m <sup>3</sup>	General population [Consumers]	Systemic	
DNEL		Dermal Long term	1 mg/kg bw/day	General population [Consumers]	Systemic	
methyl methacrylate	DNEL	Oral Long term	0.5 mg/kg bw/day	General population [Consumers]	Systemic	
	DNEL	Dermal Long term	1.5 mg/cm <sup>2</sup>	Workers	Local	
	DNEL	Dermal Short term	1.5 mg/cm <sup>2</sup>	Workers	Local	
	DNEL	Dermal Long term	1.5 mg/cm <sup>2</sup>	General	Local	

**SECTION 8: Exposure controls/personal protection**

toluene	DNEL	Short term Dermal	1.5 mg/cm <sup>2</sup>	population [Consumers] General population	Local	
	DNEL	Short term Dermal	1.5 mg/cm <sup>2</sup>	population [Consumers] General population	Local	
	DNEL	Long term Dermal	1.5 mg/cm <sup>2</sup>	General population	Local	
	DNEL	Short term Dermal	1.5 mg/cm <sup>2</sup>	Workers	Local	
	DNEL	Long term Dermal	1.5 mg/cm <sup>2</sup>	Workers	Local	
	DNEL	Long term Oral	8.2 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Dermal	8.2 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Dermal	13.67 mg/ kg bw/day	Workers	Systemic	
	DNEL	Long term Inhalation	74.3 mg/m <sup>3</sup>	General population	Systemic	
	DNEL	Long term Inhalation	104 mg/m <sup>3</sup>	General population	Local	
	DNEL	Short term Inhalation	208 mg/m <sup>3</sup>	General population	Local	
	DNEL	Long term Inhalation	208 mg/m <sup>3</sup>	Workers	Local	
	DNEL	Long term Inhalation	348.4 mg/ m <sup>3</sup>	Workers	Systemic	
	DNEL	Short term Inhalation	416 mg/m <sup>3</sup>	Workers	Local	
	DNEL	Long term Oral	8.13 mg/ kg bw/day	General population	Systemic	
	DNEL	Long term Inhalation	56.5 mg/m <sup>3</sup>	General population	Local	
	DNEL	Long term Inhalation	56.5 mg/m <sup>3</sup>	General population	Systemic	
	dioctyltin dilaurate	DNEL	Long term Inhalation	192 mg/m <sup>3</sup>	Workers	Local
		DNEL	Long term Inhalation	192 mg/m <sup>3</sup>	Workers	Systemic
		DNEL	Long term Dermal	226 mg/kg bw/day	General population	Systemic
DNEL		Short term Inhalation	226 mg/m <sup>3</sup>	General population	Local	
DNEL		Short term Inhalation	226 mg/m <sup>3</sup>	General population	Systemic	
DNEL		Long term Dermal	384 mg/kg bw/day	Workers	Systemic	
DNEL		Short term Inhalation	384 mg/m <sup>3</sup>	Workers	Local	
DNEL		Short term Inhalation	384 mg/m <sup>3</sup>	Workers	Systemic	
DNEL		Long term Oral	0.0005 mg/ kg bw/day	General population	Systemic	
DNEL		Long term Inhalation	0.0009 mg/ m <sup>3</sup>	General population	Systemic	
cumene	DNEL	Long term Inhalation	0.0035 mg/ m <sup>3</sup>	Workers	Systemic	
	DNEL	Long term Dermal	1.2 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Dermal	15.4 mg/ kg bw/day	Workers	Systemic	
	DNEL	Long term Inhalation	100 mg/m <sup>3</sup>	Workers	Systemic	
	DNEL	Short term	250 mg/m <sup>3</sup>	Workers	Local	

**SECTION 8: Exposure controls/personal protection**

benzene	DNEL	Inhalation Long term Oral	5 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	16.6 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Inhalation	1.9 mg/m <sup>3</sup>	Workers	Systemic
propylene oxide	DNEL	Long term Inhalation	0.14 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Short term Inhalation	170 mg/m <sup>3</sup>	General population	Local
	DNEL	Long term Inhalation	0.6 mg/m <sup>3</sup>	General population	Local
hydrogen chloride	DNEL	Long term Inhalation	2.4 mg/m <sup>3</sup>	Workers	Local
	DNEL	Short term Inhalation	170 mg/m <sup>3</sup>	Workers	Local
	DNEL	Long term Inhalation	8 mg/m <sup>3</sup>	Workers	Local
	DNEL	Short term Inhalation	15 mg/m <sup>3</sup>	Workers	Local
	DNEL	Long term Inhalation	8 mg/m <sup>3</sup>	General population	Local
	DNEL	Short term Inhalation	15 mg/m <sup>3</sup>	General population	Local
	DNEL	Long term Inhalation	8 mg/m <sup>3</sup>	General population	Local
	DNEL	Long term Inhalation	8 mg/m <sup>3</sup>	Workers	Local
	DNEL	Short term Inhalation	15 mg/m <sup>3</sup>	General population	Local
	DNEL	Short term Inhalation	15 mg/m <sup>3</sup>	Workers	Local
formaldehyde	DNEL	Long term Dermal	0.037 mg/ cm <sup>2</sup>	Workers	Local
	DNEL	Long term Dermal	0.012 mg/ cm <sup>2</sup>	General population [Consumers]	Local
	DNEL	Long term Dermal	12 ng/cm <sup>2</sup>	General population	Local
	DNEL	Long term Dermal	37 ng/cm <sup>2</sup>	Workers	Local
	DNEL	Long term Inhalation	0.1 mg/m <sup>3</sup>	General population	Local
	DNEL	Long term Inhalation	0.375 mg/ m <sup>3</sup>	Workers	Local
	DNEL	Short term Inhalation	0.75 mg/m <sup>3</sup>	Workers	Local
	DNEL	Long term Inhalation	3.2 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Oral	4.1 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	9 mg/m <sup>3</sup>	Workers	Systemic
ethylene oxide	DNEL	Long term Dermal	102 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	240 mg/kg bw/day	Workers	Systemic
	DMEL	Long term Inhalation	1.8 mg/m <sup>3</sup>	Workers	Local
	DMEL	Long term Inhalation	1.8 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Short term Inhalation	10 mg/m <sup>3</sup>	Workers	Systemic

**PNECs**

**SECTION 8: Exposure controls/personal protection**

Product/ingredient name	Compartment Detail	Value	Method Detail	
n-butyl acetate	Fresh water	0.18 mg/l	-	
	Marine	0.018 mg/l	-	
	Sewage Treatment Plant	35.6 mg/l	-	
	Fresh water sediment	0.981 mg/kg dwt	-	
	Marine water sediment	0.0981 mg/kg dwt	-	
	Soil	0.0903 mg/kg dwt	-	
xylene	Fresh water	0.327 mg/l	-	
	Marine water	0.327 mg/l	-	
	Sewage Treatment Plant	6.58 mg/l	-	
	Fresh water sediment	12.46 mg/kg dwt	-	
	Marine water sediment	12.46 mg/kg dwt	-	
	Soil	2.31 mg/kg dwt	-	
2-methoxy-1-methylethyl acetate	Fresh water	0.635 mg/l	-	
	Marine	0.0635 mg/l	-	
	Sewage Treatment Plant	100 mg/l	-	
	Fresh water sediment	3.29 mg/kg dwt	-	
	Marine water sediment	0.329 mg/kg dwt	-	
	Soil	0.29 mg/kg dwt	-	
ethylbenzene	Fresh water	0.1 mg/l	-	
	Marine water	0.01 mg/l	-	
	Sewage Treatment Plant	9.6 mg/l	-	
	Fresh water sediment	13.7 mg/kg dwt	-	
	Marine water sediment	1.37 mg/kg dwt	-	
	Soil	2.68 mg/kg dwt	-	
2-butoxyethyl acetate	Fresh water	0.304 mg/l	-	
	Marine water	0.0304 mg/l	-	
	Sewage Treatment Plant	90 mg/l	-	
	Fresh water sediment	2.03 mg/kg dwt	-	
	Marine water sediment	0.203 mg/kg dwt	-	
	Soil	0.415 mg/kg dwt	-	
Poly(oxy-1,2-ethanediyl), α-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-ω-hydroxy-	Secondary Poisoning	60 mg/kg	-	
	Fresh water	0.0023 mg/l	-	
	Marine water	0.00023 mg/l	-	
	Sewage Treatment Plant	10 mg/l	-	
	Fresh water sediment	3.06 mg/kg dwt	-	
	Marine water sediment	0.306 mg/kg dwt	-	
	Soil	2 mg/kg dwt	-	
	bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	Fresh water	0.0022 mg/l	-
		Marine water	0.00022 mg/l	-
		Sewage Treatment Plant	1 mg/l	-
		Fresh water sediment	1.05 mg/kg dwt	-
		Marine water sediment	0.11 mg/kg dwt	-
Soil		0.21 mg/kg dwt	-	
Poly(oxy-1,2-ethanediyl), α-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-ω-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropoxy]-	Fresh water	0.0023 mg/l	-	
	Marine water	0.00023 mg/l	-	
	Sewage Treatment Plant	10 mg/l	-	
	Fresh water sediment	3.06 mg/kg dwt	-	
	Marine water sediment	0.306 mg/kg dwt	-	
	Soil	2 mg/kg dwt	-	

**SECTION 8: Exposure controls/personal protection**

1-methoxy-2-propanol	Soil	2 mg/kg dwt	-
	Fresh water	10 mg/l	-
	Marine water	1 mg/l	-
	Sewage Treatment Plant	100 mg/l	-
	Fresh water sediment	52.3 mg/kg dwt	-
	Marine water sediment	5.2 mg/kg dwt	-
methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	Soil	4.59 mg/kg dwt	-
	Fresh water	0.0022 mg/l	-
	Marine water	0.00022 mg/l	-
	Sewage Treatment Plant	1 mg/l	-
	Fresh water sediment	1.05 mg/kg dwt	-
	Marine water sediment	0.11 mg/kg dwt	-
methyl methacrylate	Soil	0.21 mg/kg dwt	-
	Fresh water	0.94 mg/l	Assessment Factors
	Marine water	0.94 mg/l	Assessment Factors
	Sewage Treatment Plant	10 mg/l	Assessment Factors
	Fresh water sediment	5.74 mg/kg dwt	Equilibrium Partitioning
	Soil	1.47 mg/kg dwt	Equilibrium Partitioning
toluene	Fresh water	0.68 mg/l	-
	Marine water	0.68 mg/l	-
	Sewage Treatment Plant	13.61 mg/l	-
	Fresh water sediment	16.39 mg/kg dwt	-
	Marine water sediment	16.39 mg/kg dwt	-
	Soil	2.89 mg/kg dwt	-
dioctyltin dilaurate	Fresh water	0.002 µg/l	-
	Marine water	0.0002 µg/l	-
	Sewage Treatment Plant	100 mg/l	-
	Fresh water sediment	0.028 mg/kg dwt	-
	Marine water sediment	0.0028 mg/kg dwt	-
	Soil	0.006 mg/kg dwt	-
cumene	Secondary Poisoning	0.02 mg/kg	-
	Fresh water	0.035 mg/l	-
	Marine water	0.004 mg/l	-
	Sewage Treatment Plant	200 mg/l	-
	Fresh water sediment	3.22 mg/kg dwt	-
	Marine water sediment	0.322 mg/kg dwt	-
benzene	Soil	0.624 mg/kg dwt	-
	Fresh water	1.9 mg/l	Sensitivity Distribution
	Marine water	1.9 mg/l	Sensitivity Distribution
	Sewage Treatment Plant	39 mg/l	Sensitivity Distribution
	Fresh water sediment	33 mg/kg dwt	Equilibrium Partitioning
	Marine water sediment	33 mg/kg dwt	Equilibrium Partitioning
formaldehyde	Soil	4.8 mg/kg dwt	Equilibrium Partitioning
	Fresh water	0.44 mg/l	Sensitivity Distribution
	Marine water	0.44 mg/l	Assessment Factors
	Sewage Treatment Plant	0.19 mg/l	Assessment Factors
	Fresh water sediment	2.3 mg/kg dwt	Equilibrium Partitioning
	Marine water sediment	2.3 mg/kg dwt	Equilibrium Partitioning
	Soil	0.2 mg/kg dwt	Equilibrium Partitioning

**8.2 Exposure controls**



**SECTION 8: Exposure controls/personal protection**

- Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
- Individual protection measures**
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields. Recommended: chemical splash goggles and/or face shield.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.  
> 8 hours (breakthrough time): Recommended EN 374 polyvinyl alcohol (PVA) Viton® ≥ 0.7 mm  
< 1 hour (breakthrough time): Conditionally suitable materials for protective gloves; EN 374: Nitrile rubber - NBR (≥ 0.35 mm). Only suitable as splash protection. Only suitable for brief exposure. In the event of contamination, change protective gloves immediately.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Recommended: Cotton or cotton/synthetic overalls or coveralls are normally suitable.
- Other skin protection** : 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.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Recommended: EN 405:2001 + A1:2009 organic vapour (Type A) and particulate filter FFA2P3 R D
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**SECTION 9: Physical and chemical properties**

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

**9.1 Information on basic physical and chemical properties****Appearance**

- Physical state** : Liquid.
- Colour** : Colourless.
- Odour** : Fruity.
- Odour threshold** : Not available.
- Melting point/freezing point** : Not applicable.

**SECTION 9: Physical and chemical properties**

<b>Initial boiling point and boiling range</b>	: >100°C (>212°F)
<b>Flammability (solid, gas)</b>	: Not available.
<b>Upper/lower flammability or explosive limits</b>	: Lower: 0.8% Upper: 7.6%
<b>Flash point</b>	: Closed cup: 30°C (86°F)
<b>Auto-ignition temperature</b>	: 415°C (779°F)
<b>Decomposition temperature</b>	: Not applicable.
<b>pH</b>	: Not applicable.
<b>Viscosity</b>	: Kinematic (40°C): >20.5 mm <sup>2</sup> /s
<b>Solubility(ies)</b>	:

Media	Result
cold water	Not soluble
hot water	Not soluble

<b>Solubility in water</b>	: Not applicable.
<b>Miscible with water</b>	: No.
<b>Partition coefficient: n-octanol/ water</b>	: Not applicable.
<b>Vapour pressure</b>	: 1.5 kPa (11.25 mm Hg)
<b>Evaporation rate</b>	: 1 (butyl acetate = 1)
<b>Relative density</b>	: 1.001
<b>Density</b>	: 1.001 g/cm <sup>3</sup>
<b>Vapour density</b>	: 4 [Air = 1]
<b>Explosive properties</b>	: Not available.
<b>Oxidising properties</b>	: Not available.
<b>Particle characteristics</b>	
<b>Median particle size</b>	: Not applicable.

**SECTION 10: Stability and reactivity**

<b>10.1 Reactivity</b>	: No specific test data related to reactivity available for this product or its ingredients.
<b>10.2 Chemical stability</b>	: The product is stable.
<b>10.3 Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will not occur.
<b>10.4 Conditions to avoid</b>	: Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapour to accumulate in low or confined areas.
<b>10.5 Incompatible materials</b>	: Reactive or incompatible with the following materials: oxidising materials
<b>10.6 Hazardous decomposition products</b>	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

**SECTION 11: Toxicological information****11.1 Information on toxicological effects****Acute toxicity**

Product/ingredient name	Result	Species	Dose	Exposure
n-butyl acetate	LC50 Inhalation Gas.	Rat	390 ppm	4 hours
	LC50 Inhalation Vapour	Rat	>21.1 mg/l	4 hours
	LD50 Dermal	Rabbit	>14112 mg/kg	-
	LD50 Oral	Rat	10760 mg/kg	-
Solvent naphtha (petroleum), light arom.	LC50 Inhalation Vapour	Rat	6193 mg/m <sup>3</sup>	4 hours
	LD50 Dermal	Rabbit	>3160 mg/kg	-
	LD50 Oral	Rat	3592 mg/kg	-
xylene	LC50 Inhalation Gas.	Rat	5000 ppm	4 hours
	LC50 Inhalation Vapour	Rat - Male	29000 mg/l	4 hours
	LD50 Dermal	Rabbit	12126 mg/kg	-
	LD50 Oral	Rat	4300 mg/kg	-
2-methoxy-1-methylethyl acetate	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Dermal	Rat	>5000 mg/kg	-
ethylbenzene	LD50 Oral	Rat	8532 mg/kg	-
	LC50 Inhalation Vapour	Rat	6350 ppm	4 hours
	LD50 Dermal	Rabbit	12126 mg/kg	-
2-butoxyethyl acetate	LD50 Oral	Rat	3500 mg/kg	-
	LD50 Dermal	Rabbit	1500 mg/kg	-
Poly(oxy-1,2-ethanediyl), α- [3-[3-(2H-benzotriazol-2-yl) -5-(1,1-dimethylethyl) -4-hydroxyphenyl] -1-oxopropyl]-ω-hydroxy-	LD50 Oral	Rat	1880 mg/kg	-
	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
bis(1,2,2,6,6-pentamethyl- 4-piperidyl) sebacate	LD50 Oral	Rat	>3230 mg/kg	-
	LD50 Dermal	Rat	>2000 mg/kg	-
Poly(oxy-1,2-ethanediyl), α- [3-[3-(2H-benzotriazol-2-yl) -5-(1,1-dimethylethyl) -4-hydroxyphenyl] -1-oxopropyl]-ω-[3-[3-(2H- benzotriazol-2-yl)-5- (1,1-dimethylethyl) -4-hydroxyphenyl] -1-oxopropoxy]-	LD50 Oral	Rat	>5000 mg/kg	-
	LD50 Oral	Rabbit	2000 mg/kg	-
	LD50 Oral	Rat	4016 mg/kg	-
1-methoxy-2-propanol	LD50 Oral	Rat	>3230 mg/kg	-
	LD50 Dermal	Rabbit	2000 mg/kg	-
methyl 1,2,2,6,6-pentamethyl- 4-piperidyl sebacate	LD50 Oral	Rat	4016 mg/kg	-
	LD50 Oral	Rat	>3230 mg/kg	-
	LD50 Oral	Rat	>3230 mg/kg	-
methyl methacrylate	LC50 Inhalation Vapour	Rat - Male, Female	29.8 mg/l	4 hours
	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	7872 mg/kg	-
	LD50 Oral	Rat	636 mg/kg	-
toluene	LC50 Inhalation Vapour	Rat	28.1 mg/l	4 hours
	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	6450 mg/kg	-
dioctyltin dilaurate	LD50 Oral	Rat	6450 mg/kg	-
	LD50 Oral	Rat	6450 mg/kg	-
cumene	LC50 Inhalation Vapour	Rat	39000 mg/m <sup>3</sup>	4 hours
	LD50 Oral	Rat	1400 mg/kg	-
benzene	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	930 mg/kg	-
propylene oxide	LC50 Inhalation Gas.	Rat	4000 ppm	4 hours
	LD50 Oral	Rat	380 mg/kg	-
formaldehyde	LC50 Inhalation Gas.	Rat	250 ppm	4 hours
	LD50 Dermal	Rabbit	270 mg/kg	-

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ethylene oxide	LD50 Oral	Rat	100 mg/kg	-
	LC50 Inhalation Gas.	Rat	800 ppm	4 hours
	LD50 Oral	Rat	72 mg/kg	-

**Conclusion/Summary** : Not available.

### Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
8-214 HS Scratch Resistant Clear Coat	N/A	14767.0	67122.6	806.4	N/A
n-butyl acetate	10760	N/A	N/A	N/A	N/A
Solvent naphtha (petroleum), light arom.	3592	N/A	N/A	N/A	N/A
xylene	4300	1100	5000	29000	N/A
2-methoxy-1-methylethyl acetate	8532	N/A	N/A	N/A	N/A
ethylbenzene	3500	12126	N/A	11	N/A
2-butoxyethyl acetate	N/A	1500	N/A	11	N/A
1-methoxy-2-propanol	4016	N/A	N/A	N/A	N/A
methyl methacrylate	7872	N/A	N/A	29.8	N/A
toluene	N/A	N/A	N/A	28.1	N/A
dioctyltin dilaurate	6450	N/A	N/A	N/A	N/A
cumene	N/A	N/A	N/A	39	N/A
propylene oxide	380	300	N/A	3	N/A
hydrogen chloride	N/A	N/A	N/A	3	N/A
formaldehyde	100	270	250	N/A	N/A
ethylene oxide	100	N/A	700	N/A	N/A

### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
n-butyl acetate	Eyes - Moderate irritant	Rabbit	-	100 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 mg	-
Solvent naphtha (petroleum), light arom. xylene	Eyes - Mild irritant	Rabbit	-	24 hours 100 uL	-
	Eyes - Mild irritant	Rabbit	-	87 mg	-
	Eyes - Severe irritant	Rabbit	-	24 hours 5 mg	-
	Skin - Mild irritant	Rat	-	8 hours 60 uL	-
	Skin - Moderate irritant	Rabbit	-	100 %	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 mg	-
ethylbenzene	Eyes - Severe irritant	Rabbit	-	500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 15 mg	-
2-butoxyethyl acetate	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	500 mg	-
1-methoxy-2-propanol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	500 mg	-
toluene	Eyes - Mild irritant	Rabbit	-	0.5 minutes 100 mg	-
	Eyes - Severe irritant	Rabbit	-	870 ug	-
	Eyes - Severe irritant	Rabbit	-	24 hours 2 mg	-
	Skin - Mild irritant	Pig	-	24 hours 250 uL	-
	Skin - Mild irritant	Rabbit	-	435 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 mg	-
cumene	Skin - Moderate irritant	Rabbit	-	500 mg	-
	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-

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benzene	Eyes - Mild irritant	Rabbit	-	86 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 10 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 100 mg	-
	Eyes - Moderate irritant	Rabbit	-	88 mg	-
propylene oxide	Eyes - Severe irritant	Rabbit	-	24 hours 2 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 15 mg	-
	Skin - Mild irritant	Rat	-	8 hours 60 uL	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 mg	-
hydrogen chloride	Eyes - Moderate irritant	Rabbit	-	24 hours 20 mg	-
	Eyes - Severe irritant	Rabbit	-	20 mg	-
	Skin - Moderate irritant	Rabbit	-	415 mg	-
	Skin - Severe irritant	Rabbit	-	6 minutes 50 mg	-
formaldehyde	Eyes - Mild irritant	Rabbit	-	0.5 minutes 5 mg	-
	Skin - Mild irritant	Human	-	24 hours 4 %	-
	Eyes - Mild irritant	Human	-	6 minutes 1 ppm	-
	Eyes - Severe irritant	Rabbit	-	24 hours 750 ug	-
ethylene oxide	Eyes - Severe irritant	Rabbit	-	750 ug	-
	Skin - Mild irritant	Human	-	72 hours 150 ug l	-
	Skin - Mild irritant	Rabbit	-	540 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 50 mg	-
ethylene oxide	Skin - Severe irritant	Human	-	0.01 %	-
	Skin - Severe irritant	Rabbit	-	0.8 %	-
	Skin - Severe irritant	Rabbit	-	24 hours 2 mg	-
	Eyes - Moderate irritant	Rabbit	-	6 hours 18 mg	-

**Conclusion/Summary** : Not available.

**Sensitisation**

**Conclusion/Summary** : Not available.

**Mutagenicity**

**Conclusion/Summary** : Not available.

**Carcinogenicity**

**Conclusion/Summary** : Not available.

**Reproductive toxicity**

**Conclusion/Summary** : Not available.

**Teratogenicity**

**Conclusion/Summary** : Not available.

**Specific target organ toxicity (single exposure)**

Product/ingredient name	Category	Route of exposure	Target organs
n-butyl acetate	Category 3	-	Narcotic effects
Solvent naphtha (petroleum), light arom.	Category 3	-	Respiratory tract irritation
2-methoxy-1-methylethyl acetate	Category 3	-	Narcotic effects
1-methoxy-2-propanol	Category 3	-	Narcotic effects
methyl methacrylate	Category 3	-	Respiratory tract irritation

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toluene	Category 3	-	Narcotic effects
cumene	Category 3	-	Respiratory tract irritation
propylene oxide	Category 3	-	Respiratory tract irritation
formaldehyde	Category 3	-	Respiratory tract irritation
ethylene oxide	Category 3	-	Respiratory tract irritation
	Category 3	-	Narcotic effects

### Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
ethylbenzene	Category 2	-	hearing organs
toluene	Category 2	-	-
dioctyltin dilaurate	Category 1	-	immune system
benzene	Category 1	-	-
ethylene oxide	Category 1	-	nervous system

### Aspiration hazard

Product/ingredient name	Result
Solvent naphtha (petroleum), light arom.	ASPIRATION HAZARD - Category 1
ethylbenzene	ASPIRATION HAZARD - Category 1
toluene	ASPIRATION HAZARD - Category 1
cumene	ASPIRATION HAZARD - Category 1
benzene	ASPIRATION HAZARD - Category 1

**Information on likely routes of exposure** : Not available.

### Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
- Skin contact** : May cause an allergic skin reaction.
- Ingestion** : Can cause central nervous system (CNS) depression.

### Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : No specific data.
- Inhalation** : Adverse symptoms may include the following:  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness
- Ingestion** : No specific data.

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

#### Short term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

#### Long term exposure

- Potential immediate effects** : Not available.

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**Potential delayed effects** : Not available.

**Potential chronic health effects**

Not available.

**Conclusion/Summary** : Not available.

**General** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Reproductive toxicity** : No known significant effects or critical hazards.

**Other information** : Not available.

## SECTION 12: Ecological information

### 12.1 Toxicity

Product/ingredient name	Result	Species	Exposure	
n-butyl acetate	Acute EC50 397 mg/l	Algae - <i>Selenastrum capricornutum</i>	72 hours	
	Acute EC50 44 mg/l Acute LC50 32 mg/l Marine water	Daphnia - <i>Daphnia magna</i> Crustaceans - Brine shrimp - <i>Artemia salina</i>	48 hours 48 hours	
Solvent naphtha (petroleum), light arom.	Acute LC50 18 mg/l Acute NOEC 200 mg/l Acute EC50 2.9 mg/l	Fish - <i>Pimephales promelas</i> Algae Algae - <i>Pseudokirchneriella subcapitata</i>	96 hours 72 hours 72 hours	
	Acute EC50 3.2 mg/l Acute LC50 9.2 mg/l Acute NOEC >1 mg/l	Daphnia - <i>Daphnia magna</i> Fish - <i>Oncorhynchus mykiss</i> Algae - <i>Pseudokirchneriella subcapitata</i>	48 hours 96 hours 72 hours	
	xylene	Acute EC50 1 to 10 mg/l Acute EC50 1 to 10 mg/l Acute LC50 8500 µg/l Marine water	Algae Daphnia - <i>Daphnia magna</i> Crustaceans - Daggerblade grass shrimp - <i>Palaemonetes pugio</i>	72 hours 48 hours 48 hours
		Acute LC50 13400 µg/l Fresh water	Fish - Fathead minnow - <i>Pimephales promelas</i>	96 hours
2-methoxy-1-methylethyl acetate	Acute EC50 >1000 mg/l Acute EC50 408 mg/l	Algae - <i>Pseudokirchnerella subcapitata</i> Daphnia - <i>Daphnia magna</i>	96 hours 48 hours	
	ethylbenzene	Acute LC50 134 mg/l Acute EC50 4900 µg/l Marine water	Fish - <i>Oncorhynchus mykiss</i> Algae - Diatom - <i>Skeletonema costatum</i>	96 hours 72 hours
Acute EC50 7700 µg/l Marine water		Algae - Diatom - <i>Skeletonema costatum</i>	96 hours	
Acute EC50 6.53 mg/l Marine water Acute EC50 2.93 mg/l Fresh water		Crustaceans - Brine shrimp - <i>Artemia sp.</i> - Nauplii Daphnia - Water flea - <i>Daphnia magna</i> - Neonate	48 hours 48 hours	
Acute LC50 4200 µg/l Fresh water		Fish - Rainbow trout, donaldson trout - <i>Oncorhynchus mykiss</i>	96 hours	
2-butoxyethyl acetate	Acute EC50 1570 mg/l Acute EC50 37 mg/l Acute LC50 22 mg/l Acute LC50 2.8 mg/l	Algae - <i>Pseudokirchneriella subcapitata</i> Daphnia - <i>Daphnia magna</i> Fish - <i>Pimephales promelas</i> Fish	72 hours 48 hours 96 hours 96 hours	
	Poly(oxy-1,2-ethanediyl), α-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-ω-hydroxy-bis(1,2,2,6,6-pentamethyl-	Algae	72 hours	

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4-piperidyl) sebacate	Acute LC50 0.9 mg/l Acute NOEC 6.3 mg/l Acute LC50 2.8 mg/l	Fish Daphnia Fish	96 hours 21 days 96 hours
Poly(oxy-1,2-ethanediyl), α-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-ω-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropoxy]-1-methoxy-2-propanol	Acute EC50 >1000 mg/l  Acute EC50 >21000 mg/l Acute LC50 6812 mg/l Acute EC50 0.22 mg/l	Aquatic plants - <i>Selenastrum capricornutum</i> Daphnia - <i>Daphnia magna</i> Fish - <i>Leuciscus idus</i> Algae	96 hours 48 hours 96 hours 72 hours
methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	Acute LC50 0.9 mg/l Acute NOEC 6.3 mg/l Acute EC50 >110 mg/l Fresh water	Fish Daphnia Algae - <i>Pseudokirchnerella subcapitata</i>	96 hours 21 days 72 hours
methyl methacrylate	Acute EC50 69 mg/l Fresh water Acute LC50 130 mg/l Fresh water Acute NOEC 49 mg/l Fresh water	Daphnia - <i>Daphnia magna</i> Fish - <i>Pimephales promelas</i> Algae - <i>Pseudokirchnerella subcapitata</i>	48 hours 96 hours 72 hours
toluene	Chronic NOEC 37 mg/l Fresh water Chronic NOEC 9.4 mg/l Fresh water Acute EC50 12.5 mg/l Acute EC50 >433 ppm Marine water  Acute EC50 11600 µg/l Fresh water	Daphnia - <i>Daphnia magna</i> Fish - <i>Danio rerio</i> Algae Algae - Diatom - <i>Skeletonema costatum</i> Crustaceans - Scud - <i>Gammarus pseudolimnaeus</i> - Adult	21 days 35 days 72 hours 96 hours 48 hours
cumene	Acute EC50 3.8 mg/l Acute LC50 5.5 mg/l Chronic NOEC 1 mg/l Fresh water  Acute EC50 7.4 mg/l Marine water  Acute EC50 10.6 mg/l Fresh water  Acute LC50 2700 µg/l Fresh water	Daphnia - <i>Daphnia magna</i> Fish - <i>Oncorhynchus kisutch</i> Daphnia - Water flea - <i>Daphnia magna</i> Crustaceans - Brine shrimp - <i>Artemia sp.</i> - Nauplii Daphnia - Water flea - <i>Daphnia magna</i> - Neonate Fish - Rainbow trout, donaldson trout - <i>Oncorhynchus mykiss</i>	48 hours 96 hours 21 days 48 hours 48 hours 96 hours
benzene	Acute EC50 1600000 µg/l Fresh water  Acute EC50 9.23 mg/l Fresh water  Acute LC50 21 mg/l Marine water  Acute LC50 5.28 ul/L Fresh water  Chronic EC10 >1360 mg/l Fresh water  Chronic NOEC 98 mg/l Fresh water  Chronic NOEC 1.5 to 5.4 ul/L Marine water	Algae - Green algae - <i>Selenastrum sp.</i> Daphnia - Water flea - <i>Daphnia magna</i> - Neonate Crustaceans - Brine shrimp - <i>Artemia salina</i> Fish - Pink salmon - <i>Oncorhynchus gorbuscha</i> - Fry Algae - Green algae - <i>Desmodesmus subspicatus</i> Daphnia - Water flea - <i>Daphnia magna</i> Fish - Striped bass - <i>Morone saxatilis</i> - Juvenile (Fledgling, Hatchling, Weanling)	96 hours 48 hours 48 hours 96 hours 96 hours 21 days 4 weeks
propylene oxide	Acute LC50 89 ppm Marine water	Fish - Striped mullet - <i>Mugil cephalus</i>	96 hours
hydrogen chloride	Acute LC50 240000 µg/l Marine water	Crustaceans - Green crab - <i>Carcinus maenas</i> - Adult	48 hours



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formaldehyde	Acute LC50 282 ppm Fresh water	Fish - Western mosquitofish - <i>Gambusia affinis</i> - Adult	96 hours
	Acute EC50 3.48 mg/l Fresh water	Algae - Green algae - <i>Desmodesmus subspicatus</i>	72 hours
	Acute EC50 0.442 mg/l Marine water	Algae - Green algae - <i>Ulva pertusa</i>	96 hours
	Acute EC50 3.26 mg/l Fresh water	Daphnia - Water flea - <i>Daphnia magna</i> - Embryo	48 hours
	Acute LC50 11.41 mg/l Fresh water	Crustaceans - Water flea - <i>Ceriodaphnia dubia</i>	48 hours
	Acute LC50 1.41 ppm Fresh water	Fish - Rainbow trout, donaldson trout - <i>Oncorhynchus mykiss</i>	96 hours
	Chronic NOEC 0.005 mg/l Marine water	Algae - Haptophyte - <i>Isochrysis galbana</i> - Exponential growth phase	96 hours
	Chronic NOEC 3000 ppm Fresh water	Crustaceans - European crayfish - <i>Astacus astacus</i> - Egg	21 days
	Chronic NOEC 0.81 to 1.07 mg/l	Daphnia - Water flea - <i>Daphnia magna</i>	21 days
	Chronic NOEC 1.56 mg/l Fresh water	Fish - Nile tilapia - <i>Oreochromis niloticus</i> - Fingerling	12 weeks
ethylene oxide	Acute LC50 490000 µg/l Marine water	Crustaceans - Brine shrimp - <i>Artemia sp.</i>	48 hours
	Acute LC50 137000 µg/l Fresh water	Daphnia - Water flea - <i>Daphnia magna</i>	48 hours
	Acute LC50 84000 µg/l Fresh water	Fish - Fathead minnow - <i>Pimephales promelas</i>	96 hours

**Conclusion/Summary** : Not available.

### 12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
n-butyl acetate	OECD 301D Ready Biodegradability - Closed Bottle Test	>80 % - 5 days	-	-
Solvent naphtha (petroleum), light arom.	-	78 % - Readily - 28 days	-	Fresh water
2-methoxy-1-methylethyl acetate	OECD 302B Inherent Biodegradability: Zahn-Wellens/EMPA Test	100 % - 28 days	-	-
	OECD 301F Ready Biodegradability - Manometric Respirometry Test	83 % - 28 days	-	-
1-methoxy-2-propanol	OECD 301E 301E Ready Biodegradability - Modified OECD Screening Test	96 % - 28 days	-	-

**Conclusion/Summary** : Not available.

**SECTION 12: Ecological information**

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
n-butyl acetate	-	-	Readily
Solvent naphtha (petroleum), light arom.	-	-	Readily
2-methoxy-1-methylethyl acetate	-	-	Readily
2-butoxyethyl acetate	-	90.4%; 28 day(s)	-
1-methoxy-2-propanol	-	-	Readily
toluene	-	-	Readily

**12.3 Bioaccumulative potential**

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
n-butyl acetate	2.3	-	Low
Solvent naphtha (petroleum), light arom.	-	10 to 2500	High
xylene	3.12	8.1 to 25.9	Low
2-methoxy-1-methylethyl acetate	1.2	-	Low
ethylbenzene	3.6	-	Low
2-butoxyethyl acetate	1.51	-	Low
1-methoxy-2-propanol	<1	-	Low
methyl methacrylate	1.38	-	Low
toluene	2.73	90	Low
dioctyltin dilaurate	-	<100	Low
cumene	3.55	35.48	Low
benzene	2.13	11	Low
propylene oxide	<1	-	Low
hydrogen chloride	0.25	-	Low
ethylene oxide	-0.3	-	Low

**12.4 Mobility in soil**

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

**Mobility** : Not available.

**12.5 Results of PBT and vPvB assessment**

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**12.6 Other adverse effects** : No known significant effects or critical hazards.

**SECTION 13: Disposal considerations**

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).

**13.1 Waste treatment methods****Product**

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Hazardous waste** : Yes.

**Waste catalogue**

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## SECTION 13: Disposal considerations

Waste code	Waste designation
08 01 11*	waste paint and varnish containing organic solvents or other hazardous substances

### Packaging

- Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.
- Special precautions** : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number	UN1263	UN1263	UN1263	UN1263
14.2 UN proper shipping name	PAINT	PAINTPAINT	PAINT	Paint
14.3 Transport hazard class(es)	3 	3 	3 	3 
14.4 Packing group	III	III	III	III
14.5 Environmental hazards	No.	Yes.	No.	No.

### Additional information

- ADR/RID** : **Hazard identification number** 30  
**Limited quantity** 5 L  
**Special provisions** 163, 640E, 650, 367  
**Tunnel code** (D/E)
- ADN** : The product is only regulated as an environmentally hazardous substance when transported in tank vessels.  
**Special provisions** 163, 367, 640E, 650
- IMDG** : **Emergency schedules** F-E, \_S-E\_  
**Special provisions** 163, 223, 367, 955
- IATA** : **Quantity limitation** Passenger and Cargo Aircraft: 60 L. Packaging instructions: 355. Cargo Aircraft Only: 220 L. Packaging instructions: 366. Limited Quantities - Passenger Aircraft: 10 L. Packaging instructions: Y344.  
**Special provisions** A3, A72, A192

- 14.6 Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

- 14.7 Transport in bulk according to IMO instruments** : Not available.

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**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****UK (GB)/REACH****Annex XIV - List of substances subject to authorisation****Annex XIV**

None of the components are listed.

**Substances of very high concern**

Intrinsic property	Ingredient name	Status	Reference number	Date of revision
Carcinogen	methyloxirane	Candidate	-	12/19/2012
Mutagen	methyloxirane	Candidate	-	12/19/2012

**Ozone depleting substances**

Not listed.

**Prior Informed Consent (PIC)**

Not listed.

**Persistent Organic Pollutants**

Not listed.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.

**Seveso Directive**

This product is controlled under the Seveso Directive.

**Danger criteria**

Category
P5c

**National regulations**

Product/ingredient name	List name	Name on list	Classification	Notes
benzene	UK Occupational Exposure Limits EH40 - WEL	benzene; benzol	Carc.	-
propylene oxide	UK Occupational Exposure Limits EH40 - WEL	propylene oxide; 1,2-epoxypropane	Carc.	-
formaldehyde	UK Occupational Exposure Limits EH40 - WEL	formaldehyde; methanal	Carc.	-
ethylene oxide	UK Occupational Exposure Limits EH40 - WEL	ethylene oxide; epoxyethane	Carc.	-

**EU regulations**

**Industrial emissions (integrated pollution prevention and control) - Air** : Not listed

**Industrial emissions (integrated pollution prevention and control) - Water** : Not listed

**International regulations****Chemical Weapon Convention List Schedules I, II & III Chemicals**

**SECTION 15: Regulatory information**

Not listed.

**Montreal Protocol**

Not listed.

**Stockholm Convention on Persistent Organic Pollutants**

Not listed.

**Rotterdam Convention on Prior Informed Consent (PIC)**

Not listed.

**UNECE Aarhus Protocol on POPs and Heavy Metals**

Not listed.

**Inventory list**

<b>Australia</b>	: All components are listed or exempted.
<b>Canada</b>	: All components are listed or exempted.
<b>China</b>	: All components are listed or exempted.
<b>Eurasian Economic Union</b>	: <b>Russian Federation inventory</b> : Not determined.
<b>Japan</b>	: <b>Japan inventory (CSCL)</b> : Not determined. <b>Japan inventory (ISHL)</b> : Not determined.
<b>New Zealand</b>	: All components are listed or exempted.
<b>Philippines</b>	: Not determined.
<b>Republic of Korea</b>	: All components are listed or exempted.
<b>Taiwan</b>	: All components are listed or exempted.
<b>Thailand</b>	: Not determined.
<b>Turkey</b>	: Not determined.
<b>United States</b>	: Not determined.
<b>Viet Nam</b>	: Not determined.

**15.2 Chemical safety assessment** : This product contains substances for which Chemical Safety Assessments are still required.

**SECTION 16: Other information**

📌 Indicates information that has changed from previously issued version.

**Abbreviations and acronyms** :

- ATE = Acute Toxicity Estimate
- GB CLP = UK CLP (EC No 1272/2008) on the Classification, Labelling and Packaging of Substances and Mixtures as amended by (EU Exit) Regulations 2019 No. 720 and amendments
- DMEL = Derived Minimal Effect Level
- DNEL = Derived No Effect Level
- EUH statement = GB CLP-specific Hazard statement
- N/A = Not available
- PBT = Persistent, Bioaccumulative and Toxic
- PNEC = Predicted No Effect Concentration
- RRN = REACH Registration Number
- SGG = Segregation Group
- vPvB = Very Persistent and Very Bioaccumulative

**Procedure used to derive the classification**

Classification	Justification
Flam. Liq. 3, H226	On basis of test data
Skin Sens. 1, H317	Calculation method
STOT SE 3, H336	Calculation method
Aquatic Chronic 3, H412	Calculation method

**Full text of abbreviated H statements**

**SECTION 16: Other information**

H220	Extremely flammable gas.
H224	Extremely flammable liquid and vapour.
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H280	Contains gas under pressure; may explode if heated.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H340	May cause genetic defects.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H360D	May damage the unborn child.
H360Fd	May damage fertility. Suspected of damaging the unborn child.
H361	Suspected of damaging fertility or the unborn child.
H361d	Suspected of damaging the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

**Full text of classifications**

Acute Tox. 2	ACUTE TOXICITY - Category 2
Acute Tox. 3	ACUTE TOXICITY - Category 3
Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Acute 1	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
Aquatic Chronic 1	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1
Aquatic Chronic 2	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
Aquatic Chronic 3	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3
Asp. Tox. 1	ASPIRATION HAZARD - Category 1
Carc. 1A	CARCINOGENICITY - Category 1A
Carc. 1B	CARCINOGENICITY - Category 1B
Eye Dam. 1	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Flam. Gas 1A	FLAMMABLE GASES - Category 1A
Flam. Liq. 1	FLAMMABLE LIQUIDS - Category 1
Flam. Liq. 2	FLAMMABLE LIQUIDS - Category 2
Flam. Liq. 3	FLAMMABLE LIQUIDS - Category 3
Muta. 1B	GERM CELL MUTAGENICITY - Category 1B
Muta. 2	GERM CELL MUTAGENICITY - Category 2
Press. Gas (Comp.)	GASES UNDER PRESSURE - Compressed gas
Repr. 1B	REPRODUCTIVE TOXICITY - Category 1B
Repr. 2	REPRODUCTIVE TOXICITY - Category 2
Skin Corr. 1	SKIN CORROSION/IRRITATION - Category 1
Skin Corr. 1A	SKIN CORROSION/IRRITATION - Category 1A
Skin Corr. 1B	SKIN CORROSION/IRRITATION - Category 1B
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1	SKIN SENSITISATION - Category 1
Skin Sens. 1A	SKIN SENSITISATION - Category 1A
STOT RE 1	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 1

8-214 HS Scratch Resistant Clear Coat

## SECTION 16: Other information

STOT RE 2	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

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### Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

# SUMI

## Safe Use of Mixtures

### Information for end-users



**Title** : Professional spray painting, near-industrial setting

*This document is intended to communicate the conditions of safe use for the product and should always be read in combination with the product's Safety Data Sheet and labels.*

## General description of the process covered

Indoor spray painting by professionals with efficient ventilation such as spray booth or local exhaust ventilation

## Operational conditions

**Place of use** : Indoor use

## Risk management measures (RMM)

Contributing activity	Process category (ies)	Maximum duration	Ventilation	
			Type	ach (air changes per hour)
Preparation of material for application	PROC05	1 to 4 hours	Enhanced (mechanical) room ventilation	5 - 10
Loading of application equipment and handling of coated parts before curing	PROC08a	15 minutes to 1 hour	Enhanced (mechanical) room ventilation	5 - 10
Professional application of coatings and inks by spraying	PROC11	1 to 4 hours	Local exhaust ventilation	Refer to relevant technical standards
Film formation - force drying, stoving and other technologies	PROC04	1 to 4 hours	Local exhaust ventilation	Refer to relevant technical standards
Cleaning	PROC05	1 to 4 hours	Enhanced (mechanical) room ventilation	5 - 10
Waste management	PROC08a	15 minutes to 1 hour	Enhanced (mechanical) room ventilation	5 - 10

Contributing activity	Process category (ies)	Respiratory	Eye	Hands
Preparation of material for application	PROC05	None	Use eye protection according to EN 166.	Wear chemical-resistant gloves (tested to EN374) in combination with specific activity training.
Loading of application equipment and handling of coated parts before curing	PROC08a	None	Use eye protection according to EN 166.	Wear chemical-resistant gloves (tested to EN374) in combination with specific activity training.
Professional application of coatings and inks by spraying	PROC11	Compressed-air breathing apparatus to EN 14594 with an assigned protection factor of at least 20.	Use eye protection according to EN 166.	Wear chemical-resistant gloves (tested to EN374) in combination with specific activity training.
Film formation - force drying, stoving and other technologies	PROC04	Wear a respirator conforming to EN140 with an assigned protection factor of at least 10.	None	None
Cleaning	PROC05	Wear a respirator conforming to EN140 with an assigned protection factor of at least 10.	Use eye protection according to EN 166.	Wear chemical-resistant gloves (tested to EN374) in combination with specific activity training.
Waste management	PROC08a	Wear a respirator conforming to EN140 with	Use eye protection according to EN 166.	Wear chemical-resistant gloves (tested to EN374) in



		an assigned protection factor of at least 10.		combination with specific activity training.
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See chapter 8 of this Safety Data Sheet for specifications.



## Disclaimer

The information in this Safe Use of Mixture Information sheet is based on the data provided by the substance supplier for the substances in the product for which a chemical safety assessment has been carried out at the time of issue. It does not guarantee safe use of the product and does not replace any occupational risk assessment required by legislation. When developing workplace instructions for employees, SUMI sheets should always be considered in combination with the SDS and the label of the product.

No liability is accepted for any damage, no matter of what kind, which is direct or indirect consequence of acts and/or decisions (partly) based on the contents of this document.