

SAFETY DATA SHEET

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by UK REACH Regulation SI 2019/758

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

1.1 Product identifier

Product identifier : S901
Product name : ADDITIVE II
Product type : Liquid.
Other means of identification : 1250088693
Date of issue : 25 October 2022
Version : 1
Date of previous issue : No previous validation

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

Identified uses : Coating component.
Uses advised against : Not for sale to or use by consumers.

1.3 Details of the supplier of the safety data sheet

Axalta Coating Systems Germany GmbH & Co. KG
Christbusch 25
DE 42285 Wuppertal
+49 (0)202 529-0

e-mail address of person responsible for this SDS : sds-competence@axalta.com

1.4 Emergency telephone number

Supplier

Telephone number : +(44)-870-8200418
Hours of operation :

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to UK CLP/GHS

Eye Irrit. 2, H319

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

Ingredients of unknown toxicity : 1.7 percent of the mixture consists of component(s) of unknown acute oral toxicity
1.7 percent of the mixture consists of component(s) of unknown acute dermal toxicity

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

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SECTION 2: Hazards identification

Hazard pictograms :



Signal word :

Warning

Hazard statements :

H319 - Causes serious eye irritation.

Precautionary statements

Prevention :

P280 - Wear eye or face protection.

Response :

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 - If eye irritation persists: Get medical advice or attention.

Storage :

Not applicable.

Disposal :

Not applicable.

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.

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
1-pentanol	REACH #: 01-2119491284-34 EC: 200-752-1 CAS: 71-41-0	<3	Flam. Liq. 3, H226 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335	[1]
1-methoxy-2-propanol	REACH #: 01-2119457435-35 EC: 203-539-1 CAS: 107-98-2	<1	Flam. Liq. 3, H226 STOT SE 3, H336	[1] [2]
2-dimethylaminoethanol	REACH #: 01-2119492298-24 EC: 203-542-8 CAS: 108-01-0 Index: 603-047-00-0	<1	Flam. Liq. 3, H226 Acute Tox. 4, H302 Acute Tox. 4, H312 Acute Tox. 3, H331 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335	[1] [2]
acetone	REACH #: 01-2119471330-49 EC: 200-662-2 CAS: 67-64-1	≤0.3	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH066	[1] [2]
(2-methoxymethylethoxy)propanol	REACH #: 01-2119450011-60 EC: 252-104-2 CAS: 34590-94-8	≤0.3	Not classified.	[2]

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SECTION 3: Composition/information on ingredients

4-methylpentan-2-one	REACH #: 01-2119473980-30 EC: 203-550-1 CAS: 108-10-1	≤0.3	Flam. Liq. 2, H225 Acute Tox. 4, H332 Eye Irrit. 2, H319 STOT SE 3, H335 EUH066	[1] [2]
triethylamine	REACH #: 01-2119475467-26 EC: 204-469-4 CAS: 121-44-8	<0.1	Flam. Liq. 2, H225 Acute Tox. 4, H302 Acute Tox. 3, H311 Acute Tox. 3, H331 Skin Corr. 1A, H314 Eye Dam. 1, H318 STOT SE 3, H335	[1] [2]
propane-1,2-diol	REACH #: 01-2119456809-23 EC: 200-338-0 CAS: 57-55-6	≤0.1	Not classified.	[2]
n-butyl acrylate	REACH #: 01-2119453155-43 EC: 205-480-7 CAS: 141-32-2	≤0.1	Flam. Liq. 3, H226 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 STOT SE 3, H335 Aquatic Chronic 3, H412	[1] [2]
2,6-di-tert-butyl-p-cresol	REACH #: 01-2119555270-46 EC: 204-881-4 CAS: 128-37-0	<0.1	Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1] [2]
methyl methacrylate	REACH #: 01-2119452498-28 EC: 201-297-1 CAS: 80-62-6	≤0.1	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Skin Sens. 1, H317 STOT SE 3, H335	[1] [2]
potassium hydroxide	EC: 215-181-3 CAS: 1310-58-3	≤0.1	Met. Corr. 1, H290 Acute Tox. 4, H302 Skin Corr. 1A, H314 Eye Dam. 1, H318	[1] [2]
2-butoxyethanol	REACH #: 01-2119475108-36 EC: 203-905-0 CAS: 111-76-2 Index: 603-014-00-0	≤0.1	Acute Tox. 4, H302 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319	[1] [2]
ethyl acrylate	EC: 205-438-8 CAS: 140-88-5	<0.1	Flam. Liq. 2, H225 Acute Tox. 4, H302 Acute Tox. 4, H312 Acute Tox. 3, H331 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 STOT SE 3, H335 Aquatic Chronic 3, H412	[1] [2]
dibutyltin dilaurate	REACH #: 01-2119496068-27 EC: 201-039-8 CAS: 77-58-7	<0.1	Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Muta. 2, H341 Repr. 1B, H360 STOT SE 1, H370 STOT RE 1, H372 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1] [2]
acrylic acid	REACH #: 01-2119452449-31	<0.1	Flam. Liq. 3, H226 Acute Tox. 4, H302	[1] [2]

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SECTION 3: Composition/information on ingredients

	EC: 201-177-9 CAS: 79-10-7 Index: 607-061-00-8		Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Corr. 1A, H314 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 2, H411	
ethanediol	REACH #: 01-2119456816-28 EC: 203-473-3 CAS: 107-21-1 Index: 603-027-00-1	≤0.1	Acute Tox. 4, H302 STOT RE 2, H373 (kidneys) (oral)	[1] [2]
methacrylic acid	REACH #: 01-2119463884-26 EC: 201-204-4 CAS: 79-41-4	<0.1	Acute Tox. 4, H302 Acute Tox. 3, H311 Acute Tox. 4, H332 Skin Corr. 1A, H314 Eye Dam. 1, H318 STOT SE 3, H335	[1] [2]
cyclohexane	REACH #: 01-2119463273-41 EC: 203-806-2 CAS: 110-82-7	<0.1	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1] [2]
ethylene oxide	EC: 200-849-9 CAS: 75-21-8 Index: 603-023-00-X	<0.1	Flam. Gas 1A, H220 Chem. Unst. Gas A, H230 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)	[1] [2]
allyl alcohol	EC: 203-470-7 CAS: 107-18-6	<0.1	Flam. Liq. 2, H225 Acute Tox. 3, H301 Acute Tox. 3, H311 Acute Tox. 2, H330 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1] [2]
1,4-dihydroxybenzene	REACH #: 01-2119524016-51 EC: 204-617-8 CAS: 123-31-9	<0.01	Acute Tox. 4, H302 Eye Dam. 1, H318 Skin Sens. 1B, H317 Muta. 2, H341 Carc. 2, H351 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=1)	[1] [2]

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SECTION 3: Composition/information on ingredients

			See Section 16 for the full text of the H statements declared above.	
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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.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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 adverse health effects persist or are severe. 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** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. 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 adverse health effects persist or are severe. 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. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
 pain or irritation
 watering
 redness
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- 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.

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SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Recommended: alcohol-resistant foam, CO₂, powders, water spray.

Unsuitable extinguishing media : Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard.

Hazardous combustion products : Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.

5.3 Advice for firefighters

Special protective actions for fire-fighters : Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or watercourses.

Special protective equipment for fire-fighters : Appropriate breathing apparatus may be required.

SECTION 6: Accidental release measures

Due to the organic solvents content of the mixture:

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : Exclude sources of ignition and ventilate the area. Avoid breathing vapour or mist. Refer to protective measures listed in sections 7 and 8.

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 : Do not allow to enter drains or watercourses. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.

6.3 Methods and material for containment and cleaning up

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). Preferably clean with a detergent. Avoid using solvents.

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

Due to the organic solvents content of the mixture:

Prevent the creation of flammable or explosive concentrations of vapours in air and avoid vapour concentrations higher than the occupational exposure limits.

In addition, the product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard.

Keep away from heat, sparks and flame. No sparking tools should be used.

Avoid contact with skin and eyes. Avoid the inhalation of dust, particulates, spray or mist arising from the application of this mixture. Avoid inhalation of dust from sanding.

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.

Put on appropriate personal protective equipment (see Section 8).

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SECTION 7: Handling and storage

Never use pressure to empty. Container is not a pressure vessel.

Always keep in containers made from the same material as the original one.

Comply with the health and safety at work laws.

Information on fire and explosion protection

Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations.

Notes on joint storage

Keep away from: oxidising agents, strong alkalis, strong acids.

Additional information on storage conditions

Observe label precautions. Store in a dry, cool and well-ventilated area. Keep away from heat and direct sunlight.

Keep container tightly closed.

Keep away from sources of ignition. No smoking. Prevent unauthorised access. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

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
1-methoxy-2-propanol	EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin. STEL: 560 mg/m ³ 15 minutes. STEL: 150 ppm 15 minutes. TWA: 375 mg/m ³ 8 hours. TWA: 100 ppm 8 hours.
2-dimethylaminoethanol	EH40/2005 WELs (United Kingdom (UK), 1/2020). STEL: 22 mg/m ³ 15 minutes. STEL: 6 ppm 15 minutes. TWA: 2 ppm 8 hours. TWA: 7.4 mg/m ³ 8 hours.
acetone	EH40/2005 WELs (United Kingdom (UK), 1/2020). STEL: 3620 mg/m ³ 15 minutes. STEL: 1500 ppm 15 minutes. TWA: 500 ppm 8 hours. TWA: 1210 mg/m ³ 8 hours.
(2-methoxymethylethoxy)propanol	EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin. TWA: 308 mg/m ³ 8 hours. TWA: 50 ppm 8 hours.
4-methylpentan-2-one	EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin. STEL: 416 mg/m ³ 15 minutes. STEL: 100 ppm 15 minutes. TWA: 208 mg/m ³ 8 hours. TWA: 50 ppm 8 hours.
triethylamine	EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin. STEL: 17 mg/m ³ 15 minutes. TWA: 2 ppm 8 hours. TWA: 8 mg/m ³ 8 hours. STEL: 4 ppm 15 minutes.
propane-1,2-diol	EH40/2005 WELs (United Kingdom (UK), 1/2020).

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SECTION 8: Exposure controls/personal protection

n-butyl acrylate	<p>TWA: 10 mg/m³ 8 hours. Form: Particulate TWA: 474 mg/m³ 8 hours. Form: total vapour and particulates TWA: 150 ppm 8 hours. Form: total vapour and particulates EH40/2005 WELs (United Kingdom (UK), 1/2020). STEL: 26 mg/m³ 15 minutes. STEL: 5 ppm 15 minutes. TWA: 5 mg/m³ 8 hours. TWA: 1 ppm 8 hours.</p>
2,6-di-tert-butyl-p-cresol	<p>EH40/2005 WELs (United Kingdom (UK), 1/2020). TWA: 10 mg/m³ 8 hours.</p>
methyl methacrylate	<p>EH40/2005 WELs (United Kingdom (UK), 1/2020). STEL: 416 mg/m³ 15 minutes. STEL: 100 ppm 15 minutes. TWA: 208 mg/m³ 8 hours. TWA: 50 ppm 8 hours.</p>
potassium hydroxide	<p>EH40/2005 WELs (United Kingdom (UK), 1/2020). STEL: 2 mg/m³ 15 minutes.</p>
2-butoxyethanol	<p>EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin. STEL: 50 ppm 15 minutes. TWA: 25 ppm 8 hours. STEL: 246 mg/m³ 15 minutes. TWA: 123 mg/m³ 8 hours.</p>
ethyl acrylate	<p>EH40/2005 WELs (United Kingdom (UK), 1/2020). STEL: 42 mg/m³ 15 minutes. STEL: 10 ppm 15 minutes. TWA: 5 ppm 8 hours. TWA: 21 mg/m³ 8 hours.</p>
dibutyltin dilaurate	<p>EH40/2005 WELs (United Kingdom (UK), 1/2020). [tin compounds, organic, except cyhexatin (ISO)] Absorbed through skin. STEL: 0.2 mg/m³, (as Sn) 15 minutes. TWA: 0.1 mg/m³, (as Sn) 8 hours.</p>
acrylic acid	<p>EH40/2005 WELs (United Kingdom (UK), 1/2020). STEL: 59 mg/m³ 1 minutes. STEL: 20 ppm 1 minutes. TWA: 29 mg/m³ 8 hours. TWA: 10 ppm 8 hours.</p>
ethanediol	<p>EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin. TWA: 10 mg/m³ 8 hours. Form: Particulate TWA: 20 ppm 8 hours. Form: Vapour STEL: 40 ppm 15 minutes. Form: Vapour TWA: 52 mg/m³ 8 hours. Form: Vapour STEL: 104 mg/m³ 15 minutes. Form: Vapour</p>
methacrylic acid	<p>EH40/2005 WELs (United Kingdom (UK), 1/2020). STEL: 143 mg/m³ 15 minutes. STEL: 40 ppm 15 minutes. TWA: 72 mg/m³ 8 hours. TWA: 20 ppm 8 hours.</p>
cyclohexane	<p>EH40/2005 WELs (United Kingdom (UK), 1/2020). STEL: 1050 mg/m³ 15 minutes. STEL: 300 ppm 15 minutes. TWA: 100 ppm 8 hours. TWA: 350 mg/m³ 8 hours.</p>
ethylene oxide	<p>EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin. TWA: 1 ppm 8 hours. TWA: 1.8 mg/m³ 8 hours.</p>
allyl alcohol	<p>EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin.</p>

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SECTION 8: Exposure controls/personal protection

1,4-dihydroxybenzene	STEL: 9.7 mg/m ³ 15 minutes. STEL: 4 ppm 15 minutes. TWA: 2 ppm 8 hours. TWA: 4.8 mg/m ³ 8 hours. EH40/2005 WELs (United Kingdom (UK), 1/2020). TWA: 0.5 mg/m ³ 8 hours.
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Biological exposure indices

Product/ingredient name	Exposure indices
4-methylpentan-2-one	EH40/2005 BMGVs (United Kingdom (UK), 8/2018) BGV: 20 µmol/l, 4-methylpentan-2-one [in urine]. Sampling time: post shift.
2-butoxyethanol	EH40/2005 BMGVs (United Kingdom (UK), 8/2018) BGV: 240 mmol/mol creatinine, butoxyacetic acid [in urine]. Sampling time: post shift.

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
1-pentanol	DNEL	Long term Inhalation	20 ppm	Workers	Systemic
	DNEL	Long term Oral	12.5 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	13 mg/m ³	General population	Local
	DNEL	Short term Inhalation	218 mg/m ³	General population	Local
	DNEL	Long term Inhalation	73.16 mg/m ³	Workers	Local
	DNEL	Short term Inhalation	292 mg/m ³	Workers	Local
1-methoxy-2-propanol	DNEL	Long term Inhalation	100 ppm	Workers	Systemic
	DNEL	Long term Oral	33 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	43.9 mg/m ³	General population	Systemic
	DNEL	Long term Dermal	78 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	183 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	369 mg/m ³	Workers	Systemic
	DNEL	Short term Inhalation	553.5 mg/m ³	Workers	Local
	DNEL	Short term Inhalation	553.5 mg/m ³	Workers	Systemic
2-dimethylaminoethanol	DNEL	Long term Oral	0.126 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	0.25 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	0.43755 mg/m ³	General population	Systemic
	DNEL	Short term Dermal	1.2 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	1.76 mg/m ³	Workers	Local
	DNEL	Long term Inhalation	1.76 mg/m ³	Workers	Systemic

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acetone	DNEL	Short term Inhalation	5.28 mg/m ³	Workers	Systemic
	DNEL	Short term Inhalation	13.53 mg/m ³	Workers	Local
	DNEL	Short term Dermal	100 µg/cm ²	Workers	Local
	DNEL	Long term Inhalation	500 ppm	Workers	Systemic
	DNEL	Long term Oral	62 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	62 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	186 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	200 mg/m ³	General population	Systemic
	DNEL	Long term Inhalation	1210 mg/m ³	Workers	Systemic
	DNEL	Short term Inhalation	2420 mg/m ³	Workers	Local
(2-methoxymethylethoxy)propanol	DNEL	Long term Dermal	65 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	50.4 ppm	Workers	Systemic
	DNEL	Long term Oral	36 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	37.2 mg/m ³	General population	Systemic
	DNEL	Long term Dermal	121 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	283 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	308 mg/m ³	Workers	Systemic
	DNEL	Long term Oral	4.2 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	4.2 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	11.8 mg/kg bw/day	Workers	Systemic
4-methylpentan-2-one	DNEL	Long term Inhalation	14.7 mg/m ³	General population	Local
	DNEL	Long term Inhalation	14.7 mg/m ³	General population	Systemic
	DNEL	Long term Inhalation	83 mg/m ³	Workers	Local
	DNEL	Long term Inhalation	83 mg/m ³	Workers	Systemic
	DNEL	Short term Inhalation	155.2 mg/m ³	General population	Local
	DNEL	Short term Inhalation	155.2 mg/m ³	General population	Systemic
	DNEL	Short term Inhalation	208 mg/m ³	Workers	Local
	DNEL	Short term Inhalation	208 mg/m ³	Workers	Systemic
	DNEL	Long term Inhalation	8.4 mg/m ³	Workers	Local
	DNEL	Long term Inhalation	8.4 mg/m ³	Workers	Systemic
triethylamine	DNEL	Long term Dermal	12.1 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	12.6 mg/m ³	Workers	Local
	DNEL	Short term Inhalation	12.6 mg/m ³	Workers	Systemic

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propane-1,2-diol	DNEL	Inhalation Long term	10 mg/m ³	General population	Local
	DNEL	Inhalation Long term	10 mg/m ³	Workers	Local
	DNEL	Inhalation Long term	50 mg/m ³	General population	Systemic
	DNEL	Inhalation Long term	168 mg/m ³	Workers	Systemic
n-butyl acrylate	DNEL	Inhalation Long term	11 mg/m ³	Workers	Local
2,6-di-tert-butyl-p-cresol	DNEL	Long term Oral	0.25 mg/ kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	0.435 mg/ m ³	General population	Systemic
	DNEL	Long term Inhalation	1.76 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	0.25 mg/ kg bw/day	General population	Systemic
	DNEL	Long term Dermal	0.5 mg/kg bw/day	Workers	Systemic
methyl methacrylate	DNEL	Long term Oral	8.2 mg/kg bw/day	General population	Systemic
	DNEL	Short term Inhalation	208 mg/m ³	General population	Local
	DNEL	Short term Inhalation	416 mg/m ³	Workers	Local
	DNEL	Short term Dermal	1.5 mg/cm ²	General population	Local
	DNEL	Long term Dermal	1.5 mg/cm ²	General population	Local
	DNEL	Short term Dermal	1.5 mg/cm ²	Workers	Local
	DNEL	Long term Dermal	1.5 mg/cm ²	Workers	Local
	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 ³	General population	Systemic
	DNEL	Long term Inhalation	104 mg/m ³	General population	Local
	DNEL	Long term Inhalation	208 mg/m ³	Workers	Local
	DNEL	Long term Inhalation	348.4 mg/ m ³	Workers	Systemic
	potassium hydroxide	DNEL	Long term Inhalation	1 mg/m ³	General population
DNEL		Long term Inhalation	1 mg/m ³	Workers	Local
2-butoxyethanol	DNEL	Long term Inhalation	20 ppm	Workers	Systemic
	DNEL	Long term Oral	6.3 mg/kg bw/day	General population	Systemic
	DNEL	Short term Oral	26.7 mg/ kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	59 mg/m ³	General population	Systemic
	DNEL	Long term Inhalation	98 mg/m ³	Workers	Systemic
	DNEL	Short term Inhalation	147 mg/m ³	General population	Local
	DNEL	Short term Inhalation	246 mg/m ³	Workers	Local
	DNEL	Short term	426 mg/m ³	General	Systemic

METALLIC BINDER

SECTION 8: Exposure controls/personal protection

ethyl acrylate	DNEL	Inhalation Short term	1091 mg/m ³	population Workers	Systemic
	DNEL	Inhalation Short term Dermal	0.92 mg/cm ²	General population	Local
	DNEL	Dermal Short term	0.92 mg/cm ²	Workers	Local
dibutyltin dilaurate	DNEL	Inhalation Long term	2.5 mg/m ³	General population	Local
	DNEL	Inhalation Long term	21 mg/m ³	Workers	Local
	DNEL	Oral Long term	0.0031 mg/kg bw/day	General population	Systemic
	DNEL	Inhalation Long term	0.0046 mg/m ³	General population	Systemic
	DNEL	Inhalation Short term	0.059 mg/m ³	Workers	Systemic
	DNEL	Dermal Short term	0.5 mg/kg bw/day	General population	Systemic
	DNEL	Oral Short term	0.02 mg/kg bw/day	General population	Systemic
	DNEL	Inhalation Long term	0.02 mg/m ³	Workers	Systemic
	DNEL	Inhalation Short term	0.04 mg/m ³	General population	Systemic
	DNEL	Dermal Long term	0.16 mg/kg bw/day	General population	Systemic
acrylic acid	DNEL	Dermal Long term	0.43 mg/kg bw/day	Workers	Systemic
	DNEL	Dermal Short term	2.08 mg/kg bw/day	Workers	Systemic
	DNEL	Inhalation Short term	30 mg/m ³	Workers	Local
	DNEL	Inhalation Long term	30 mg/m ³	Workers	Local
	DNEL	Inhalation Short term	30 mg/m ³	Workers	Systemic
	DNEL	Inhalation Long term	30 mg/m ³	Workers	Systemic
	DNEL	Dermal Short term	1 mg/cm ²	General population	Local
	DNEL	Inhalation Short term	3.6 mg/m ³	General population	Local
	DNEL	Inhalation Long term	3.6 mg/m ³	General population	Local
	DNEL	Inhalation Long term	7 mg/m ³	General population	Local
ethanediol	DNEL	Inhalation Long term	35 mg/m ³	Workers	Local
	DNEL	Dermal Long term	53 mg/kg bw/day	General population	Systemic
	DNEL	Dermal Long term	106 mg/kg bw/day	Workers	Systemic
methacrylic acid	DNEL	Inhalation Long term	8.3 ppm	Workers	Systemic
	DNEL	Dermal Long term	2.55 mg/kg bw/day	General population	Systemic
	DNEL	Dermal Long term	4.25 mg/kg bw/day	Workers	Systemic
	DNEL	Inhalation Long term	6.3 mg/m ³	General population	Systemic
	DNEL	Inhalation Long term	6.55 mg/m ³	General population	Local
	DNEL	Inhalation Long term	29.6 mg/m ³	Workers	Systemic

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SECTION 8: Exposure controls/personal protection

cyclohexane	DNEL	Inhalation Long term	88 mg/m ³	Workers	Local
	DNEL	Inhalation Short term Dermal	1 %	General population	Local
	DNEL	Long term Oral	59.4 mg/ kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	206 mg/m ³	General population	Local
	DNEL	Long term Inhalation	206 mg/m ³	General population	Systemic
	DNEL	Short term Inhalation	412 mg/m ³	General population	Local
	DNEL	Short term Inhalation	412 mg/m ³	General population	Systemic
	DNEL	Long term Inhalation	700 mg/m ³	Workers	Local
	DNEL	Long term Inhalation	700 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	1186 mg/ kg bw/day	General population	Systemic
	DNEL	Short term Inhalation	1400 mg/ m ³	Workers	Local
	DNEL	Short term Inhalation	1400 mg/ m ³	Workers	Systemic
	DNEL	Long term Dermal	2016 mg/ kg bw/day	Workers	Systemic
	ethylene oxide	DMEL	Long term Inhalation	1.8 mg/m ³	Workers
DMEL		Long term Inhalation	1.8 mg/m ³	Workers	Systemic
DNEL		Short term Inhalation	10 mg/m ³	Workers	Systemic
allyl alcohol	DNEL	Short term Dermal	7.6 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Oral	0.075 mg/ kg bw/day	General population	Systemic
	DNEL	Long term Dermal	0.125 mg/ kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	4.63 mg/m ³	Workers	Systemic
1,4-dihydroxybenzene	DNEL	Short term Inhalation	12.1 mg/m ³	Workers	Local
	DNEL	Short term Inhalation	12.1 mg/m ³	Workers	Systemic
	DNEL	Long term Oral	0.6 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	1.05 mg/m ³	General population	Systemic
	DNEL	Long term Dermal	1.66 mg/ kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	2.1 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	3.33 mg/ kg bw/day	Workers	Systemic

PNECs

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SECTION 8: Exposure controls/personal protection

Product/ingredient name	Compartment Detail	Value	Method Detail
1-pentanol	Fresh water	0.12 mg/l	-
	Marine water	0.012 mg/l	-
	Secondary Poisoning	1.2 mg/l	-
	Fresh water sediment	0.496 mg/kg	-
	Marine water sediment	0.0496 mg/kg	-
	Sewage Treatment Plant	37 mg/l	-
	Soil	1.068 mg/kg	-
1-methoxy-2-propanol	Marine water	1 mg/l	-
	Fresh water	10 mg/l	-
	Fresh water sediment	52.3 mg/kg	-
	Marine water sediment	5.2 mg/kg	-
	Sewage Treatment Plant	100 mg/l	-
	Soil	10.6 mg/l	-
acetone	Marine water sediment	1.06 mg/l	-
	Sediment	30.4 mg/kg	-
	Marine water sediment	3.04 mg/kg	-
	Soil	29.5 mg/kg	-
	Sewage Treatment Plant	100 mg/l	-
	Soil	100 mg/l	-
(2-methoxymethylethoxy)propanol	Marine water	1.9 mg/l	-
	Fresh water	19 mg/l	-
	Fresh water sediment	70.2 mg/l	-
	Secondary Poisoning	190 mg/l	-
	Sewage Treatment Plant	4168 mg/l	-
	Marine water sediment	7.02 mg/kg	-
	Soil	2.74 mg/kg	-
4-methylpentan-2-one	Marine water	0.06 mg/l	-
	Fresh water	0.6 mg/l	-
	Sediment	8.27 mg/kg	-
propane-1,2-diol	Marine water	57.2 mg/l	-
	Sediment	50 mg/l	-
n-butyl acrylate	Fresh water	0.00272 mg/l	-
	Marine water	0.000272 mg/l	-
	Sewage Treatment Plant	3.5 mg/l	-
	Fresh water sediment	0.0338 mg/kg dwt	-
methyl methacrylate	Marine water sediment	0.00338 mg/kg dwt	-
	Soil	1 mg/kg dwt	-
	Fresh water	0.94 mg/l	-
	Fresh water sediment	10.2 mg/kg dwt	-
	Marine water	0.094 mg/l	-
	Marine water sediment	10.02 mg/kg dwt	-
	Soil	1.48 mg/kg dwt	-
2-butoxyethanol	Sewage Treatment Plant	10 mg/l	-
	Sewage Treatment Plant	463 mg/l	-
	Soil	2.33 mg/kg	-
	Marine water sediment	3.46 mg/kg	-
	Marine water	0.88 mg/l	-
	Fresh water	8.8 mg/l	-
	Fresh water sediment	34.6 mg/kg	-

8.2 Exposure controls

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SECTION 8: Exposure controls/personal protection

Appropriate engineering controls : Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and solvent vapours below the OEL, suitable respiratory protection must be worn.

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. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Use safety eyewear designed to protect against splash of liquids.

Skin protection

Hand protection

There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals.

The breakthrough time must be greater than the end use time of the product.

The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.

Gloves should be replaced regularly and if there is any sign of damage to the glove material.

Always ensure that gloves are free from defects and that they are stored and used correctly.

The performance or effectiveness of the glove may be reduced by physical/chemical damage and poor maintenance.

Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.

Gloves : Duration / breakthrough time: <1 hour,
Glove material: NBR, nitrile rubber, material thickness as splash protection: at least 0.2 mm, (EN374)
Glove material: NBR, nitrile rubber Material thickness for short-term contact: at least 0.5 mm, (EN374)

The recommendation for the type or types of glove to use when handling this product is based on information from the following source:

Expert judgment

The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment.

Body protection : Personnel should wear antistatic clothing made of natural fibres or of high-temperature-resistant synthetic fibres.

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 : If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators.

Dry sanding, flame cutting and/or welding of the dry paint film will give rise to dust and/or hazardous fumes. Wet sanding/flattening should be used wherever possible. If exposure cannot be avoided by the provision of local exhaust ventilation, suitable respiratory protective equipment should be used.

Environmental exposure controls : Do not allow to enter drains or watercourses.

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 : Milky.
Odour : Not available.

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SECTION 9: Physical and chemical properties

Odour threshold	: Not available.
Melting point/freezing point	: Not applicable.
Initial boiling point and boiling range	: 100 to 100.1°C (212 to 212.2°F)
Flammability (solid, gas)	: Not available.
Upper/lower flammability or explosive limits	: Not available.
Flash point	: Closed cup: 68°C (154.4°F) [Product does not sustain combustion.]
Auto-ignition temperature	: 300°C (572°F)
Decomposition temperature	: Not applicable.
pH	: 7.8 to 8.2
Viscosity	: Not available.
Solubility in water	: Not available.
Miscible with water	: Yes.
Partition coefficient: n-octanol/ water	: Not applicable.
Vapour pressure	: 2.8 kPa (20.9 mm Hg)
Relative density	: Not available.
Density	: 1.006 g/cm ³
Vapour density	: Not available.
Explosive properties	: Not available.
Oxidising properties	: Not available.
Weight volatiles	: 88.3 % (w/w)
VOC content	: 3.4 % (w/w) (2010/75/EU)
<u>Particle characteristics</u>	
Median particle size	: Not applicable.

room temperature (=20°C)

SECTION 10: Stability and reactivity

10.1 Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	: Stable under recommended storage and handling conditions (see Section 7).
10.3 Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	: When exposed to high temperatures may produce hazardous decomposition products.
10.5 Incompatible materials	: Keep away from the following materials to prevent strong exothermic reactions: oxidising agents, strong alkalis, strong acids.
10.6 Hazardous decomposition products	: Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen. Not applicable

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SECTION 10: Stability and reactivity**SECTION 11: Toxicological information****11.1 Information on toxicological effects****Acute toxicity**

Product/ingredient name	Result	Species	Dose	Exposure
1-methoxy-2-propanol	LD50 Dermal	Rabbit	13 g/kg	-
	LD50 Oral	Rat	6600 mg/kg	-
2-dimethylaminoethanol	LC50 Inhalation Gas.	Rat	1641 ppm	4 hours
	LD50 Oral	Rat	2 g/kg	-
acetone	LC50 Inhalation Vapour	Rat	21 mg/l	4 hours
	LD50 Dermal	Rabbit	2001 mg/kg	-
	LD50 Oral	Rat	5800 mg/kg	-
(2-methoxymethylethoxy) propanol	LD50 Dermal	Rabbit	9510 mg/kg	-
4-methylpentan-2-one	LC50 Inhalation Vapour	Rat	16.4 mg/l	4 hours
	LD50 Oral	Rat	2080 mg/kg	-
triethylamine	LD50 Oral	Rat	460 mg/kg	-
propane-1,2-diol	LD50 Dermal	Rabbit	20800 mg/kg	-
	LD50 Oral	Rat	20 g/kg	-
n-butyl acrylate	LC50 Inhalation Gas.	Rat	2730 ppm	4 hours
	LD50 Oral	Rat	3150 mg/kg	-
	LC50 Inhalation Vapour	Rat	78000 mg/m ³	4 hours
methyl methacrylate	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	7872 mg/kg	-
	LD50 Oral	Rat	333 mg/kg	-
potassium hydroxide	LD50 Oral	Rat	2010 mg/kg	-
2-butoxyethanol	LD50 Dermal	Rat	917 mg/kg	-
	LD50 Oral	Rat	917 mg/kg	-
ethyl acrylate	LC50 Inhalation Vapour	Rat - Female	9.137 mg/l	4 hours
	LD50 Dermal	Rat	3049 mg/kg	-
	LD50 Oral	Rat	800 mg/kg	-
dibutyltin dilaurate	LD50 Oral	Rat - Male, Female	2071 mg/kg	-
	LD50 Dermal	Rabbit	2001 mg/kg	-
	LD50 Oral	Rat	1337 mg/kg	-
ethanediol	LD50 Oral	Rat	4700 mg/kg	-
	LC50 Inhalation Vapour	Rat	2.7 mg/l	4 hours
methacrylic acid	LD50 Dermal	Rabbit	500 mg/kg	-
	LD50 Oral	Rat	1060 mg/kg	-
	LD50 Oral	Rat	6240 mg/kg	-
cyclohexane	LD50 Oral	Rat	6240 mg/kg	-
ethylene oxide	LC50 Inhalation Gas.	Rat	800 ppm	4 hours
	LD50 Oral	Rat	72 mg/kg	-

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SECTION 11: Toxicological information

allyl alcohol	LC50 Inhalation Gas.	Rat	165 ppm	4 hours
	LD50 Dermal	Rabbit	45 mg/kg	-
	LD50 Oral	Rat	64 mg/kg	-
1,4-dihydroxybenzene	LD50 Oral	Rat	302 mg/kg	-

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)
Mixture	N/A	N/A	515074.2	662.7	N/A
1-pentanol	N/A	N/A	N/A	11	N/A
1-methoxy-2-propanol	6600	13000	N/A	N/A	N/A
2-dimethylaminoethanol	2000	1100	1641	N/A	N/A
acetone	5800	2001	N/A	21	N/A
(2-methoxymethylethoxy)propanol	N/A	9510	N/A	N/A	N/A
4-methylpentan-2-one	2080	N/A	N/A	16.4	N/A
triethylamine	460	300	N/A	3	N/A
propane-1,2-diol	20000	20800	N/A	N/A	N/A
n-butyl acrylate	3150	N/A	2730	N/A	N/A
methyl methacrylate	7872	N/A	N/A	78	N/A
potassium hydroxide	333	N/A	N/A	N/A	N/A
2-butoxyethanol	1200	2010	N/A	11	N/A
ethyl acrylate	800	1100	N/A	9.137	N/A
dibutyltin dilaurate	2071	N/A	N/A	N/A	N/A
acrylic acid	1337	1100	N/A	11	N/A
ethanediol	500	N/A	N/A	N/A	N/A
methacrylic acid	1060	500	N/A	11	N/A
cyclohexane	6240	N/A	N/A	N/A	N/A
ethylene oxide	100	N/A	700	N/A	N/A
allyl alcohol	64	300	165	3	N/A
1,4-dihydroxybenzene	302	N/A	N/A	N/A	N/A

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
1-pentanol	Eyes - Severe irritant	Rabbit	-	24 hours 5 uL	-
	Eyes - Severe irritant	Rabbit	-	81 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 mg	-
	Skin - Severe irritant	Rabbit	-	24 hours 3200 mg	-
1-methoxy-2-propanol	Skin - Mild irritant	Rabbit	-	500 mg	-
2-dimethylaminoethanol	Eyes - Oedema of the conjunctivae	Rabbit	3	-	-
	Eyes - Severe irritant	Rabbit	-	5 uL	-
acetone	Skin - Mild irritant	Rabbit	-	445 mg	-
	Eyes - Mild irritant	Human	-	186300 ppm	-
	Eyes - Mild irritant	Rabbit	-	10 uL	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 20 mg	-
	Eyes - Severe irritant	Rabbit	-	20 mg	-
	Skin - Mild irritant	Rabbit	-	395 mg	-
4-methylpentan-2-one	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 100 uL	-
	Eyes - Severe irritant	Rabbit	-	40 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
triethylamine	Skin - Mild irritant	Rabbit	-	365 mg	-
propane-1,2-diol	Skin - Mild irritant	Woman	-	96 hours 30 %	-
	Eyes - Mild irritant	Rabbit	-	50 mg	-

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SECTION 11: Toxicological information

2,6-di-tert-butyl-p-cresol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 10 mg	-
2-butoxyethanol	Skin - Mild irritant	Rabbit	-	500 mg	-
	Skin - Mild irritant	Human	-	48 hours 500 mg	-
ethyl acrylate	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-
	Skin - Mild irritant	Rabbit	-	500 mg	-
	Eyes - Mild irritant	Rabbit	-	45 mg	-
dibutyltin dilaurate	Skin - Mild irritant	Rabbit	-	24 hours 10 mg	-
	Eyes - Moderate irritant	Rabbit	-	500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 100 mg	-
ethanediol	Skin - Severe irritant	Rabbit	-	500 mg	-
	Skin - Mild irritant	Rabbit	-	555 mg	-
ethylene oxide	Eyes - Moderate irritant	Rabbit	-	6 hours 18 mg	-
	Skin - Severe irritant	Human	-	25 ppm	-
allyl alcohol	Eyes - Severe irritant	Rabbit	-	20 mg	-
	Skin - Mild irritant	Rabbit	-	0.5 MI	-
1,4-dihydroxybenzene	Skin - Mild irritant	Human	-	2 %	-
	Skin - Severe irritant	Human	-	5 %	-

Sensitisation

Mutagenicity

Carcinogenicity

Reproductive toxicity

Teratogenicity

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
1-pentanol	Category 3	-	Respiratory tract irritation
1-methoxy-2-propanol	Category 3	-	Narcotic effects
2-dimethylaminoethanol	Category 3	-	Respiratory tract irritation
acetone	Category 3	-	Narcotic effects
4-methylpentan-2-one	Category 3	-	Respiratory tract irritation
triethylamine	Category 3	-	Respiratory tract irritation
n-butyl acrylate	Category 3	-	Respiratory tract irritation
methyl methacrylate	Category 3	-	Respiratory tract irritation
ethyl acrylate	Category 3	-	Respiratory tract irritation
dibutyltin dilaurate	Category 1	-	-
acrylic acid	Category 3	-	Respiratory tract irritation
methacrylic acid	Category 3	-	Respiratory tract irritation
cyclohexane	Category 3	-	Narcotic effects
ethylene oxide	Category 3	-	Respiratory tract irritation
allyl alcohol	Category 3	-	Narcotic effects
	Category 3	-	Respiratory tract irritation

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SECTION 11: Toxicological information

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
dibutyltin dilaurate	Category 1	-	-
ethanediol	Category 2	oral	kidneys
ethylene oxide	Category 1	-	nervous system

Aspiration hazard

Product/ingredient name	Result
cyclohexane	ASPIRATION HAZARD - Category 1

Information on likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes serious eye irritation.
Inhalation : No known significant effects or critical hazards.
Skin contact : No known significant effects or critical hazards.
Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
 pain or irritation
 watering
 redness
Inhalation : No specific data.
Skin contact : No specific data.
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.
Potential delayed effects : Not available.

Potential chronic health effects

Product/ingredient name	Result	Species	Dose	Exposure
methacrylic acid	Chronic NOAEL Inhalation Gas.	Rat	100 ppm	90 days

Conclusion/Summary : Not available.
General : No known significant effects or critical hazards.
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.

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SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
1-pentanol	Acute EC50 714 mg/l Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	Acute LC50 180000 µg/l Marine water	Fish - Inland silverside - Menidia beryllina	96 hours
1-methoxy-2-propanol	Acute LC50 >21100 mg/l	Daphnia - Daphnia	48 hours
	Acute LC50 ≥1000 mg/l	Fish - Trout	96 hours
2-dimethylaminoethanol	Acute EC50 98.37 mg/l	Daphnia	48 hours
	Acute LC50 146.63 mg/l Fresh water	Fish	96 hours
acetone	Acute EC50 20.565 mg/l Marine water	Algae - Green algae - Ulva pertusa	96 hours
	Acute LC50 4.42589 ml/L Marine water	Crustaceans - Calanoid copepod - Acartia tonsa - Copepodid	48 hours
	Acute LC50 10000 µg/l Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	Acute LC50 5600 ppm Fresh water Chronic NOEC 4.95 mg/l Marine water	Fish - Guppy - Poecilia reticulata Algae - Green algae - Ulva pertusa	96 hours 96 hours
4-methylpentan-2-one	Chronic NOEC 0.016 ml/L Fresh water	Crustaceans - Daphnia - Daphniidae	21 days
	Chronic NOEC 0.1 ml/L Fresh water	Daphnia - Water flea - Daphnia magna - Neonate	21 days
	Acute LC50 505000 µg/l Fresh water	Fish - Fathead minnow - Pimephales promelas	96 hours
	Chronic NOEC 78 mg/l Fresh water	Daphnia - Water flea - Daphnia magna	21 days
propane-1,2-diol	Chronic NOEC 168 mg/l Fresh water	Fish - Fathead minnow - Pimephales promelas - Embryo	33 days
	Acute EC50 >110 ppm Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	Acute LC50 1020000 µg/l Fresh water	Crustaceans - Water flea - Ceriodaphnia dubia	48 hours
2,6-di-tert-butyl-p-cresol	Acute LC50 710000 µg/l Fresh water	Fish - Fathead minnow - Pimephales promelas	96 hours
	Acute EC50 1440 µg/l Fresh water	Daphnia - Water flea - Daphnia pulex - Neonate	48 hours
methyl methacrylate	Acute LC50 130000 µg/l Fresh water	Fish - Fathead minnow - Pimephales promelas - Adult	96 hours
	Acute EC50 >1000 mg/l Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
2-butoxyethanol	Acute LC50 800000 µg/l Marine water	Crustaceans - Common shrimp, sand shrimp - Crangon crangon	48 hours
	Acute LC50 1250000 µg/l Marine water	Fish - Inland silverside - Menidia beryllina	96 hours
	Acute EC50 1 mg/l	Algae	72 hours
dibutyltin dilaurate	Acute EC50 463 µg/l	Daphnia	48 hours
	Acute LC50 3.1 mg/l	Fish	96 hours
	Chronic EC10 >2 mg/l Fresh water	Algae - Green algae - Desmodesmus subspicatus	96 hours
	Acute EC50 0.13 mg/l Fresh water	Algae	72 hours
acrylic acid	Acute EC50 95 mg/l Fresh water	Daphnia	48 hours
	Acute LC50 27 mg/l Fresh water	Fish	96 hours
	Acute NOEC 0.03 mg/l Fresh water	Algae	72 hours
	Chronic NOEC 3.8 mg/l Fresh water	Daphnia - Water flea - Daphnia magna - Neonate	21 days
	Acute LC50 6900000 µg/l Fresh water	Crustaceans - Water flea - Ceriodaphnia dubia - Neonate	48 hours
ethanediol	Acute LC50 41000 mg/l Fresh water	Daphnia - Water flea - Daphnia magna - Neonate	48 hours
	Acute LC50 8050000 µg/l Fresh water	Fish - Fathead minnow -	96 hours

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SECTION 12: Ecological information

methacrylic acid	Chronic NOEC 53 mg/l Fresh water	Pimephales promelas Daphnia - Water flea - Daphnia magna - Neonate	21 days
cyclohexane	Acute LC50 4530 µg/l Fresh water	Fish - Fathead minnow - Pimephales promelas	96 hours
ethylene oxide	Acute LC50 490000 µg/l Marine water	Crustaceans - Brine shrimp - Artemia sp.	48 hours
	Acute LC50 137000 µg/l Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	Acute LC50 84000 µg/l Fresh water	Fish - Fathead minnow - Pimephales promelas	96 hours
allyl alcohol	Acute LC50 1000 to 10000 µg/l Marine water	Crustaceans - Common shrimp, sand shrimp - Crangon crangon - Larvae	48 hours
	Acute LC50 320 µg/l Fresh water	Fish - Fathead minnow - Pimephales promelas	96 hours
1,4-dihydroxybenzene	Acute EC50 130 µg/l Fresh water	Daphnia - Water flea - Daphnia magna - Larvae	48 hours
	Acute LC50 44 µg/l Fresh water	Fish - Rainbow trout, donaldson trout - Oncorhynchus mykiss	96 hours

Conclusion/Summary : Not available.

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
1-methoxy-2-propanol	OECD 301E	96 % - 28 days	-	-
2-dimethylaminoethanol	OECD 302C	60.5 % - Readily - 28 days	-	-
acrylic acid	Inherent Biodegradability: Modified MITI Test (II)	68 % - Readily - 14 days	-	-
	OECD 302C			
ethylene oxide	Inherent Biodegradability: Modified MITI Test (II)	69 % - Readily - 20 days	-	-
	-			

Conclusion/Summary : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
1-methoxy-2-propanol	-	-	Readily
2-dimethylaminoethanol	-	-	Readily
acrylic acid	-	-	Readily
ethylene oxide	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
1-pentanol	1.51	-	low
1-methoxy-2-propanol	<1	-	low
2-dimethylaminoethanol	-0.55	-	low
acetone	-0.23	-	low
(2-methoxymethylethoxy) propanol	0.004	-	low
4-methylpentan-2-one	1.9	-	low
triethylamine	1.45	<0.5	low
propane-1,2-diol	-1.07	-	low
n-butyl acrylate	2.38	17.27	low
2,6-di-tert-butyl-p-cresol	5.1	330 to 1800	high
methyl methacrylate	1.38	-	low
2-butoxyethanol	0.81	-	low

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ethyl acrylate	1.18	2.072	low
dibutyltin dilaurate	4.44	2.91	low
acrylic acid	0.38	3.162	low
ethanediol	-1.36	-	low
methacrylic acid	0.93	-	low
cyclohexane	3.44	167	low
ethylene oxide	-0.3	-	low
allyl alcohol	0.17	-	low
1,4-dihydroxybenzene	0.59	3.162	low

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : 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 : The classification of the product may meet the criteria for a hazardous waste.

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.

15 01 10* packaging containing residues of or contaminated by hazardous substances

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. 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	Not regulated.	9003	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	SUBSTANCES WITH A FLASH-POINT ABOVE 60 °C AND NOT MORE THAN 100 °C (1-pentanol)	-	-

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SECTION 14: Transport information

14.3 Transport hazard class(es)	-	9	-	-
14.4 Packing group	-	-	-	-
14.5 Environmental hazards	No.	No.	No.	No.

Additional information

ADN : The product is only regulated as a dangerous good when transported in tank vessels.

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.

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

None of the components are 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 not controlled under the Seveso Directive.

National regulations

Product/ingredient name	List name	Name on list	Classification	Notes
ethylene oxide	UK Occupational Exposure Limits EH40 - WEL	ethylene oxide; epoxyethane	Carc.	-

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

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SECTION 15: Regulatory information

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
Eye Irrit. 2, H319	Calculation method

Full text of abbreviated H statements

H220	Extremely flammable gas.
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H230	May react explosively even in the absence of air.
H280	Contains gas under pressure; may explode if heated.
H290	May be corrosive to metals.
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.
H351	Suspected of causing cancer.
H360	May damage fertility or the unborn child.
H360Fd	May damage fertility. Suspected of damaging the unborn child.
H370	Causes damage to organs.
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

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SECTION 16: Other information

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. 1B	CARCINOGENICITY - Category 1B
Carc. 2	CARCINOGENICITY - Category 2
Chem. Unst. Gas A	CHEMICALLY UNSTABLE GASES - Category A
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. 2	FLAMMABLE LIQUIDS - Category 2
Flam. Liq. 3	FLAMMABLE LIQUIDS - Category 3
Met. Corr. 1	CORROSIVE TO METALS - Category 1
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
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. 1B	SKIN SENSITISATION - Category 1B
STOT RE 1	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 1
STOT RE 2	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
STOT SE 1	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 1
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

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Notice to reader

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SECTION 16: Other information