# SAFETY DATA SHEET



KORRO PVB - All variants

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

#### 1.1 Product identifier

Product name : KORRO PVB - All variants

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

Product use : Paint.

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

Teknos Group Oy, Takkatie 3, FI-00370 HELSINKI, FINLAND. Tel. +358 9 506 091.

e-mail address of person : Prod-safe@teknos.com

responsible for this SDS

**National contact** 

Teknos Ireland Limited, 52 Ballymoughan Road, Magherafelt, BT45 6HN, UK. Tel. +44 (0) 2879 301 472.

#### 1.4 Emergency telephone number

National advisory body/Poison Centre

Telephone number : NHS: 111

## **SECTION 2: Hazards identification**

## 2.1 Classification of the substance or mixture

**Product definition**: Mixture

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

Flam. Liq. 2, H225 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 STOT SE 3, H335 STOT SE 3, H336 STOT RE 2, H373

Aquatic Chronic 2, H411

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

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

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

#### 2.2 Label elements

Hazard pictograms











Signal word : Danger

**Hazard statements** : H225 - Highly flammable liquid and vapour.

H315 - Causes skin irritation.

H317 - May cause an allergic skin reaction. H318 - Causes serious eye damage.

H335 - May cause respiratory irritation.

H336 - May cause drowsiness or dizziness. H373 - May cause damage to organs through prolonged or repeated exposure.

H411 - Toxic to aquatic life with long lasting effects.

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## SECTION 2: Hazards identification

## **Precautionary statements**

**Prevention** : P280 - Wear protective gloves. Wear eye or face protection.

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition

sources. No smoking.

P273 - Avoid release to the environment.

Response : P391 - Collect spillage.

**Storage** : P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.

**Disposal** : P501 - Dispose of contents and container in accordance with all local, regional,

national and international regulations.

**Hazardous ingredients** : Contains: Propan-2-ol; Xylene; iso-butanol and reaction product: bisphenol-A-

(epichlorhydrin); epoxy resin

Supplemental label

elements

: Warning! Hazardous respirable droplets may be formed when sprayed. Do not

breathe spray or mist.

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

#### 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	Specific Conc. Limits, M-factors and ATEs	Туре
Propan-2-ol	REACH #: 01-2119457558-25 EC: 200-661-7 CAS: 67-63-0 Index: 603-117-00-0	≥25 - ≤50	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336	-	[1] [2]
Xylene	REACH #: 01-2119488216-32 EC: 215-535-7 CAS: 1330-20-7 Index: 601-022-00-9	≥10 - ≤25	Flam. Liq. 3, H226 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 STOT RE 2, H373 (oral, inhalation) Asp. Tox. 1, H304	ATE [Dermal] = 1100 mg/kg ATE [Inhalation (vapours)] = 11 mg/ I	[1] [2]
titanium dioxide	REACH #: 01-2119489379-17 EC: 236-675-5 CAS: 13463-67-7	≤10	Carc. 2, H351 (inhalation)	-	[1] [*]
iso-butanol	REACH #: 01-2119484609-23 EC: 201-148-0 CAS: 78-83-1 Index: 603-108-00-1	≤10	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 STOT SE 3, H336	-	[1] [2]

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

SECTION 3. Compo	31tion/illioillat		greaterits		
Trizinc bis(orthophosphate)	REACH #: 01-2119485044-40 EC: 231-944-3 CAS: 7779-90-0 Index: 030-011-00-6	≤10	Aquatic Acute 1, H400 Aquatic Chronic 1, H410	M [Acute] = 1 M [Chronic] = 1	[1]
Ethylbenzene	REACH #: 01-2119489370-35 EC: 202-849-4 CAS: 100-41-4 Index: 601-023-00-4	≤5	Flam. Liq. 2, H225 Acute Tox. 4, H332 STOT RE 2, H373 (hearing organs) (oral, inhalation) Asp. Tox. 1, H304	ATE [Inhalation (vapours)] = 11 mg/	[1] [2]
Urea-formaldehyde-polymer	CAS: 68002-18-6	≤3	Aquatic Chronic 4, H413	-	[1]
reaction product: bisphenol- A-(epichlorhydrin); epoxy resin	EC: 500-033-5 CAS: 25068-38-6	≤3	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317	-	[1]
Butan-1-ol	REACH #: 01-2119484630-38 EC: 200-751-6 CAS: 71-36-3 Index: 603-004-00-6	≤3	Flam. Liq. 3, H226 Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 STOT SE 3, H336	ATE [Oral] = 790 mg/kg	[1] [2]
Phenol	REACH #: 01-2119471329-32 EC: 203-632-7 CAS: 108-95-2 Index: 604-001-00-2	≤0.8	Acute Tox. 3, H301 Acute Tox. 3, H311 Acute Tox. 3, H331 Skin Corr. 1B, H314 Eye Dam. 1, H318 Muta. 2, H341 STOT RE 2, H373	ATE [Oral] = 100 mg/kg ATE [Dermal] = 630 mg/kg ATE [Inhalation (vapours)] = 3 mg/l Skin Corr. 1B, H314: $C \ge 3\%$ Skin Irrit. 2, H315: $1\% \le C < 3\%$ Eye Dam. 1, H318: $C \ge 3\%$ Eye Irrit. 2, H319: $1\% \le C < 3\%$	[1] [2]
Zinc oxide	REACH #: 01-2119463881-32 EC: 215-222-5 CAS: 1314-13-2 Index: 030-013-00-7	≤0.3	Aquatic Acute 1, H400 Aquatic Chronic 1, H410	M [Acute] = 1 M [Chronic] = 1	[1]
Fatty acids, tall-oil, compds. with oleylamine	REACH #: 01-2119974148-28 EC: 288-315-1 CAS: 85711-55-3	<0.1	Eye Dam. 1, H318 Skin Sens. 1A, H317 STOT RE 2, H373	-	[1]
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. 3, H331 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Muta. 2, H341 Carc. 1B, H350 STOT SE 3, H335	ATE [Oral] = 100 mg/kg ATE [Dermal] = 300 mg/kg ATE [Inhalation (gases)] = 700 ppm Skin Corr. 1B, H314: $C \ge 25\%$ Skin Irrit. 2, H315: $5\% \le C < 25\%$ Eye Dam. 1, H318: $C \ge 25\%$ Eye Irrit. 2, H319: $5\% \le C < 25\%$	[1] [2]

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SECTION 3: Composition/information on ingredients							
		Skin Sens. 1, H317: C ≥ 0.2% STOT SE 3, H335: C ≥ 5%					
	See Section 16 for the full text of the H statements declared above.						

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
- [\*] The classification as a carcinogen by inhalation applies only to mixtures placed on the market in powder form containing 1% or more of titanium dioxide particles with aerodynamic diameter ≤ 10 µm not bound within a matrix.

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

# **SECTION 4: First aid measures**

### 4.1 Description of first aid measures

**Eye contact** 

: Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician.

**Inhalation** 

: Get medical attention immediately. Call a poison center or physician. 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. 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. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact

: Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion

: Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a 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

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## **SECTION 4: First aid measures**

**Eye contact** : Adverse symptoms may include the following:

> watering redness

Inhalation Adverse symptoms may include the following:

respiratory tract irritation

coughing

nausea or vomiting

headache

drowsiness/fatigue dizziness/vertigo unconsciousness

Skin contact : Adverse symptoms may include the following:

pain or irritation

redness

blistering may occur

Ingestion : Adverse symptoms may include the following:

stomach pains

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

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed.

The exposed person may need to be kept under medical surveillance for 48 hours.

**Specific treatments** No specific treatment.

# **SECTION 5: Firefighting measures**

## 5.1 Extinguishing media

Suitable extinguishing

media

: Use dry chemical, CO2, water spray (fog) or foam.

Unsuitable extinguishing

media

: Do not use water jet.

## 5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : Highly 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. This material is toxic 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 nitrogen oxides phosphorus oxides halogenated compounds metal oxide/oxides

## 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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

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## 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. Do not breathe 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. Collect spillage.

### 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. Absorb with an inert 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. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. 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.

## 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 breathe vapour or mist. Do not ingest. 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

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# **SECTION 7: Handling and storage**

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**

	Notification and MAPP threshold	Safety report threshold
<b>P</b> 5c E2	5000 tonnes 200 tonnes	50000 tonnes 500 tonnes

## 7.3 Specific end use(s)

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

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

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

## 8.1 Control parameters

### Occupational exposure limits

Product/ingredient name	Exposure limit values
Propan-2-ol	EH40/2005 WELs (United Kingdom (UK), 1/2020)
	STEL 15 minutes: 1250 mg/m³.
	STEL 15 minutes: 500 ppm.
	TWA 8 hours: 999 mg/m³.
	TWA 8 hours: 400 ppm.
Xylene	EH40/2005 WELs (United Kingdom (UK), 1/2020) [xylene, o-,m-,
	p- or mixed isomers] Absorbed through skin.
	STEL 15 minutes: 441 mg/m³.
	TWA 8 hours: 50 ppm.
	TWA 8 hours: 220 mg/m³.
	STEL 15 minutes: 100 ppm.
iso-butanol	EH40/2005 WELs (United Kingdom (UK), 1/2020)
	STEL 15 minutes: 231 mg/m³.
	STEL 15 minutes: 75 ppm.
	TWA 8 hours: 154 mg/m³.
	TWA 8 hours: 50 ppm.
Ethylbenzene	EH40/2005 WELs (United Kingdom (UK), 1/2020) Absorbed
	through skin.
	STEL 15 minutes: 552 mg/m³.
	STEL 15 minutes: 125 ppm.
	TWA 8 hours: 100 ppm.
	TWA 8 hours: 441 mg/m³.
Butan-1-ol	EH40/2005 WELs (United Kingdom (UK), 1/2020) Absorbed
	through skin.
	STEL 15 minutes: 154 mg/m³.
Dhanal	STEL 15 minutes: 50 ppm.
Phenol	EH40/2005 WELs (United Kingdom (UK), 1/2020) Absorbed
	through skin. TWA 8 hours: 2 ppm.
	STEL 15 minutes: 16 mg/m³.
	STEL 15 minutes: 16 mg/m . STEL 15 minutes: 4 ppm.
	TWA 8 hours: 7.8 mg/m³.
Formaldehyde	EH40/2005 WELs (United Kingdom (UK), 1/2020) Carc.
Official Control of	STEL 15 minutes: 2.5 mg/m³.
	OTEL 13 minutes. 2.3 mg/m .

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STEL 15 minutes: 2 ppm. TWA 8 hours: 2 ppm. TWA 8 hours: 2.5 mg/m³.

#### **Biological exposure indices**

Product/ingredient name	Exposure indices
₹ylene	EH40/2005 BMGVs (United Kingdom (UK), 1/2020) [Xylene, o-,
	m-, p- or mixed isomers]
	BGV: 650 mmol/mol creatinine, methyl hippuric acid [in urine].
	Sampling time: post shift.

# Recommended monitoring procedures

Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

## **DNELs/DMELs**

# Product/ingredient name

Propan-2-ol

#### Result

**DNEL - Workers - Long term - Inhalation** 

500 mg/m<sup>3</sup>

Effects: Systemic

**DNEL - Workers - Long term - Dermal** 

888 mg/kg bw/day Effects: Systemic

DNEL - General population - Long term - Oral

26 mg/kg bw/day Effects: Systemic

**DNEL - General population - Short term - Oral** 

51 mg/kg bw/day Effects: Systemic

DNEL - General population - Long term - Inhalation

89 mg/m<sup>3</sup>

Effects: Systemic

DNEL - General population - Short term - Inhalation

178 mg/m³ Effects: Systemic

DNEL - General population - Long term - Dermal

319 mg/kg bw/day Effects: Systemic

DNEL - Workers - Short term - Inhalation

1000 mg/m³ Effects: Systemic

DNEL - General population - Long term - Oral

5 mg/kg bw/day Effects: Systemic

DNEL - General population - Long term - Inhalation

65.3 mg/m³ Effects: Local

DNEL - General population - Long term - Inhalation

Xylene

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65.3 mg/m³
Effects: Systemic

**DNEL - General population - Long term - Dermal** 

125 mg/kg bw/day Effects: Systemic

**DNEL - Workers - Long term - Dermal** 

212 mg/kg bw/day Effects: Systemic

DNEL - Workers - Long term - Inhalation

221 mg/m³ Effects: Local

**DNEL - Workers - Long term - Inhalation** 

221 mg/m³ Effects: Systemic

DNEL - General population - Short term - Inhalation

260 mg/m³ Effects: Local

DNEL - General population - Short term - Inhalation

260 mg/m³ Effects: Systemic

**DNEL - Workers - Short term - Inhalation** 

442 mg/m³ Effects: Local

**DNEL - Workers - Short term - Inhalation** 

442 mg/m³ Effects: Systemic

DNEL - General population - Long term - Inhalation

28 μg/m³ <u>Effects</u>: Local

**DNEL - Workers - Long term - Inhalation** 

170 μg/m³ <u>Effects</u>: Local

iso-butanol DNEL - General population - Long term - Inhalation

55 mg/m³ Effects: Local

**DNEL - Workers - Long term - Inhalation** 

310 mg/m³ Effects: Local

Ethylbenzene DMEL - Workers - Long term - Inhalation

442 mg/m³ Effects: Local

**DMEL - Workers - Short term - Inhalation** 

884 mg/m³ Effects: Systemic

DNEL - General population - Long term - Oral

1.6 mg/kg bw/day Effects: Systemic

DNEL - General population - Long term - Inhalation

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15 mg/m³ Effects: Systemic

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titanium dioxide

**DNEL - Workers - Long term - Inhalation** 

77 mg/m<sup>3</sup>

Effects: Systemic

**DNEL - Workers - Long term - Dermal** 

180 mg/kg bw/day Effects: Systemic

DNEL - Workers - Short term - Inhalation

293 mg/m<sup>3</sup> Effects: Local

DNEL - General population - Long term - Oral

1.5625 mg/kg bw/day Effects: Systemic

**DNEL - General population - Long term - Dermal** 

3.125 mg/kg bw/day Effects: Systemic

DNEL - General population - Long term - Inhalation

55.357 mg/m<sup>3</sup> Effects: Systemic

DNEL - General population - Long term - Inhalation

155 mg/m<sup>3</sup> Effects: Local

**DNEL - Workers - Long term - Inhalation** 

310 mg/m<sup>3</sup> Effects: Local

DNEL - General population - Long term - Inhalation

0.452 mg/m<sup>3</sup> Effects: Systemic

DNEL - General population - Long term - Oral

0.5 mg/kg bw/day Effects: Systemic

DNEL - General population - Long term - Dermal

0.5 mg/kg bw/day Effects: Systemic

**DNEL - Workers - Long term - Dermal** 

1.23 mg/kg bw/day Effects: Systemic

**DNEL - Workers - Long term - Inhalation** 

8 mg/m<sup>3</sup>

Effects: Systemic

**DNEL - Workers - Short term - Inhalation** 

16 mg/m<sup>3</sup> Effects: Local

Fatty acids, tall-oil, compds. with oleylamine

DNEL - General population - Long term - Oral

0.012 mg/kg bw/day Effects: Systemic

DNEL - General population - Long term - Dermal

0.012 mg/kg bw/day Effects: Systemic

**DNEL - Workers - Long term - Dermal** 

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Butan-1-ol

Phenol

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0.024 mg/kg bw/day Effects: Systemic

Formaldehyde

DNEL - General population - Long term - Dermal

12 µg/cm<sup>2</sup> Effects: Local

**DNEL - Workers - Long term - Dermal** 

37 µg/cm<sup>2</sup> Effects: Local

DNEL - General population - Long term - Inhalation

 $0.1 \text{ mg/m}^3$ Effects: Local

**DNEL - Workers - Long term - Inhalation** 

0.375 mg/m<sup>3</sup> Effects: Local

**DNEL - Workers - Short term - Inhalation** 

0.75 mg/m<sup>3</sup> Effects: Local

DNEL - General population - Long term - Inhalation

3.2 mg/m<sup>3</sup>

Effects: Systemic

DNEL - General population - Long term - Oral

4.1 mg/kg bw/day Effects: Systemic

**DNEL - Workers - Long term - Inhalation** 

9 mg/m<sup>3</sup>

Effects: Systemic

DNEL - General population - Long term - Dermal

102 mg/kg bw/day Effects: Systemic

**DNEL - Workers - Long term - Dermal** 

240 mg/kg bw/day Effects: Systemic

#### **PNECs**

Not available.

## 8.2 Exposure controls

**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.

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#### **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: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

# 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.

Recommendations: Wear suitable gloves tested to EN374.

< 1 hour (breakthrough time): Nitrile gloves. thickness > 0.3 mm

1 - 4 hours (breakthrough time): polyvinyl alcohol (PVA) thickness > 0.3 mm or

4H / Silver Shield® gloves.

> 8 hours (breakthrough time): Viton® thickness > 0.3 mm gloves Wash hands before breaks and immediately after handling the product.

## **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. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.

## 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.

Filter type: A

Filter type (spray application): A P

# **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 : Various
Odour : Slight
Odour threshold : Not available.

Melting point/freezing point : Not available.

Initial boiling point and

boiling range

. .

Ingredient name	°C	°F	Method
Propan-2-ol	83	181.4	
water	100	212	

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# **SECTION 9: Physical and chemical properties**

Flammability : Not available.

Lower and upper explosion : ✓ wer: 0.8% (xylene)

limit Upper: 12% (Isopropyl alcohol)

Flash point : Closed cup: 6°C (42.8°F)

Auto-ignition temperature

Ingredient name	°C	°F	Method
Butan-1-ol	355	671	EU A.15
iso-butanol	415	779	

Decomposition temperature : Not available.pH : Not applicable.

Viscosity : Kinematic (40°C): >20.5 mm²/s

Solubility(ies) :

Not available.

Solubility in water : Not available.

Partition coefficient: n-octanol/ : Not applicable.

water

Vapour pressure :

	Vapour Pressure at 20°C		Vapour pressure at 50°C		re at 50°C	
Ingredient name	mm Hg	kPa	Method	mm Hg	kPa	Method
Propan-2-ol	33.00268	4.4				
water	17.5	2.3				

Relative density : Not available.

Density : 1 g/cm³

Vapour density : Not available.

**Particle characteristics** 

Median particle size : Not applicable.

## 9.2 Other information

9.2.1 Information with regard to physical hazard classes

Explosive properties : Not available.

Oxidising properties : Not available.

9.2.2 Other safety characteristics

Not applicable.

# **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 : The product is stable.

10.3 Possibility of hazardous reactions

: Under normal conditions of storage and use, hazardous reactions will not occur.

**10.4 Conditions to avoid** : 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.

**10.5 Incompatible materials** : Reactive or incompatible with the following materials: oxidising materials

**10.6 Hazardous** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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# 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

**Acute toxicity** 

Product/ingredient name Result

Propan-2-ol Rabbit - Dermal - LD50

12800 mg/kg

**Rat - Oral - LD50** 5000 mg/kg

Toxic effects: Behavioral - General anesthetic

Xylene Rat - Oral - LD50

4300 mg/kg

Toxic effects: Liver - Other changes Kidney, Ureter, and

Bladder - Other changes

Rat - Inhalation - LC50 Vapour

21.7 mg/l [4 hours]

iso-butanol Rat - Oral - LD50

2460 mg/kg

Rabbit - Dermal - LD50

3400 mg/kg

Rat - Inhalation - LC50 Vapour

19200 mg/m<sup>3</sup> [4 hours]

Ethylbenzene Rat - Oral - LD50

3500 mg/kg

Rabbit - Dermal - LD50

15400 mg/kg

Rat - Inhalation - LC50 Dusts and mists

29000 mg/l [4 hours]

Urea-formaldehyde-polymer Rat - Oral - LD50

>5 g/kg

<u>Toxic effects</u>: Olfaction - Other changes Behavioral - Somnolence (general depressed activity) Behavioral - Food

intake (animal)

Rabbit - Dermal - LD50

>5 g/kg

Toxic effects: Skin After systemic exposure - Dermatitis, other

Butan-1-ol Rat - Oral - LD50

790 mg/kg

Toxic effects: Liver - Fatty liver degeneration Kidney, Ureter,

and Bladder - Other changes Blood - Other changes

Rabbit - Dermal - LD50

3400 mg/kg

Rat - Inhalation - LC50 Vapour

24000 mg/m³ [4 hours]

Phenol Rat - Oral - LD50

317 mg/kg

Toxic effects: Behavioral - Convulsions or effect on seizure

threshold

Rat - Dermal - LD50

669 mg/kg

Toxic effects: Behavioral - Tremor Kidney, Ureter, and Bladder

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- Hematuria Skin After topical exposure - Cutaneous sensitization (experimental)

Rabbit - Dermal - LD50

630 mg/kg

Rat - Inhalation - LC50 Vapour

316 mg/m<sup>3</sup> [4 hours]

Formaldehyde Rat - Oral - LD50

100 mg/kg

Rabbit - Dermal - LD50

270 mg/kg

Rat - Inhalation - LC50 Gas.

250 ppm [4 hours]

**Conclusion/Summary [Product]**: 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)
KORRO PVB	20705.6	5848.9	N/A	46.8	N/A
Propan-2-ol	5000	12800	N/A	N/A	N/A
Xylene	4300	1100	N/A	11	N/A
iso-butanol	2460	3400	N/A	N/A	N/A
Ethylbenzene	3500	15400	N/A	11	29000
Butan-1-ol	790	3400	N/A	24	N/A
Phenol	100	630	N/A	3	N/A
Formaldehyde	100	300	700	N/A	N/A

## Skin corrosion/irritation

Product/ingredient name Result

Propan-2-ol Rabbit - Skin - Mild irritant

Amount/concentration applied: 500 mg

**Xylene** Rat - Skin - Mild irritant

> Duration of treatment/exposure: 8 hours Amount/concentration applied: 60 uL

Rabbit - Skin - Moderate irritant

Duration of treatment/exposure: 24 hours Amount/concentration applied: 500 mg

Rabbit - Skin - Moderate irritant Amount/concentration applied: 100 %

titanium dioxide Human - Skin - Mild irritant

> **Duration of treatment/exposure: 72 hours** Amount/concentration applied: 300 ug I

Rabbit - Skin - Mild irritant Ethylbenzene

> <u>Duration of treatment/exposure</u>: 24 hours Amount/concentration applied: 15 mg

reaction product: bisphenol-A-Rabbit - Skin - Moderate irritant

(epichlorhydrin); epoxy resin **Duration of treatment/exposure**: 24 hours Amount/concentration applied: 500 uL

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Rabbit - Skin - Severe irritant

<u>Duration of treatment/exposure</u>: 24 hours Amount/concentration applied: 2 mg

Butan-1-ol Rabbit - Skin - Moderate irritant

<u>Duration of treatment/exposure</u>: 24 hours <u>Amount/concentration applied</u>: 20 mg

Phenol Pig - Skin - Severe irritant

<u>Duration of treatment/exposure</u>: 0.5 minutes Amount/concentration applied: 400 uL

Rabbit - Skin - Mild irritant

Amount/concentration applied: 100 mg

Rabbit - Skin - Severe irritant

Amount/concentration applied: 535 mg

Rabbit - Skin - Mild irritant

<u>Duration of treatment/exposure</u>: 24 hours <u>Amount/concentration applied</u>: 500 mg

Formaldehyde Human - Skin - Mild irritant

<u>Duration of treatment/exposure</u>: 72 hours <u>Amount/concentration applied</u>: 150 ug I

Human - Skin - Severe irritant

Amount/concentration applied: 0.01 %

Rabbit - Skin - Mild irritant

Amount/concentration applied: 540 mg

Rabbit - Skin - Moderate irritant

<u>Duration of treatment/exposure</u>: 24 hours <u>Amount/concentration applied</u>: 50 mg

Rabbit - Skin - Severe irritant

<u>Duration of treatment/exposure</u>: 24 hours <u>Amount/concentration applied</u>: 2 mg

Rabbit - Skin - Severe irritant

Amount/concentration applied: 0.8 %

Mouse - Skin - Moderate irritant

Amount/concentration applied: 7 %

Rat - Skin - Moderate irritant Amount/concentration applied: 7 %

**Conclusion/Summary [Product]**: Not available.

Serious eye damage/eye irritation

**Product/ingredient name** 

Propan-2-ol

**Xylene** 

Zinc oxide

Result

Rabbit - Eyes - Moderate irritant

<u>Duration of treatment/exposure</u>: 24 hours <u>Amount/concentration applied</u>: 100 mg

Rabbit - Eyes - Moderate irritant Amount/concentration applied: 10 mg

Rabbit - Eyes - Severe irritant

Amount/concentration applied: 100 mg

Rabbit - Eyes - Mild irritant

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Amount/concentration applied: 87 mg

Rabbit - Eyes - Severe irritant

Duration of treatment/exposure: 24 hours Amount/concentration applied: 5 mg

Ethylbenzene Rabbit - Eyes - Severe irritant

Amount/concentration applied: 500 mg

Urea-formaldehyde-polymer Rabbit - Eyes - Severe irritant

> Duration of treatment/exposure: 24 hours Amount/concentration applied: 100 uL

reaction product: bisphenol-A-Rabbit - Eyes - Mild irritant (epichlorhydrin); epoxy resin

Amount/concentration applied: 100 mg

Rabbit - Eyes - Severe irritant Butan-1-ol

> **Duration of treatment/exposure**: 24 hours Amount/concentration applied: 2 mg

Rabbit - Eyes - Severe irritant

Amount/concentration applied: 0.005 MI

Rabbit - Eyes - Severe irritant

Amount/concentration applied: 1.62 mg

Phenol Rabbit - Eyes - Mild irritant

Duration of treatment/exposure: 0.5 minutes

Amount/concentration applied: 5 mg

Rabbit - Eyes - Severe irritant Amount/concentration applied: 5 mg

Zinc oxide Rabbit - Eyes - Mild irritant

> Duration of treatment/exposure: 24 hours Amount/concentration applied: 500 mg

Formaldehyde **Human - Eyes - Mild irritant** 

> Duration of treatment/exposure: 6 minutes Amount/concentration applied: 1 ppm

Rabbit - Eyes - Severe irritant

Duration of treatment/exposure: 24 hours Amount/concentration applied: 750 ug

Rabbit - Eyes - Severe irritant

Amount/concentration applied: 750 ug

Rabbit - Eyes - Severe irritant

Amount/concentration applied: 37 %

Rabbit - Eyes - Severe irritant

Amount/concentration applied: 10 mg

Mouse - Eyes - Moderate irritant Amount/concentration applied: 3 %

**Conclusion/Summary [Product]**: Not available.

**Respiratory corrosion/irritation** 

Not available.

Conclusion/Summary [Product] : Not available.

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## Respiratory or skin sensitization

Not available.

Skin

**Conclusion/Summary [Product]**: Not available.

Respiratory

**Conclusion/Summary [Product]** : Not available.

## **Germ cell mutagenicity**

Not available.

Conclusion/Summary [Product] : Not available.

## **Carcinogenicity**

It has been observed that the carcinogenic hazard of this product arises when respirable dust is inhaled in quantities leading to significant impairment of particle clearance mechanisms in the lung.

Not available.

**Conclusion/Summary [Product]**: Not available.

## Reproductive toxicity

Not available.

**Conclusion/Summary [Product]**: Not available.

## Specific target organ toxicity (single exposure)

Product/ingredient name Result

Propan-2-ol STOT SE 3, H336 (Narcotic effects)

Xylene STOT SE 3, H335 (Respiratory tract irritation) iso-butanol STOT SE 3, H335 (Respiratory tract irritation)

STOT SE 3, H336 (Narcotic effects)

Butan-1-ol STOT SE 3, H335 (Respiratory tract irritation)

STOT SE 3, H336 (Narcotic effects)

Formaldehyde STOT SE 3, H335 (Respiratory tract irritation)

#### Specific target organ toxicity (repeated exposure)

Product/ingredient name Result

▼ylene STOT RE 2, H373 (oral, inhalation)

Ethylbenzene STOT RE 2, H373 (hearing organs) (oral, inhalation)

Phenol STOT RE 2, H373 Fatty acids, tall-oil, compds. with oleylamine STOT RE 2, H373

**Aspiration hazard** 

Product/ingredient name Result

Xylene ASPIRATION HAZARD - Category 1
Ethylbenzene ASPIRATION HAZARD - Category 1

Information on likely routes of exposure

Not available.

Potential acute health effects

**Eye contact** : Causes serious eye damage.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or

dizziness. May cause respiratory irritation.

**Skin contact**: Causes skin irritation. May cause an allergic skin reaction.

Ingestion : Can cause central nervous system (CNS) depression.

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

**Eye contact** : Adverse symptoms may include the following:

pain watering redness

**Inhalation** : Adverse symptoms may include the following:

respiratory tract irritation

coughing

nausea or vomiting

headache

drowsiness/fatigue dizziness/vertigo unconsciousness

**Skin contact**: Adverse symptoms may include the following:

pain or irritation

redness

blistering may occur

**Ingestion** : Adverse symptoms may include the following:

stomach pains

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

## **Short term exposure**

Potential immediate

: Not available.

effects

Potential delayed effects : No

: Not available.

**Long term exposure** 

**Potential immediate** 

: Not available.

effects

Potential delayed effects : Not available.

## Potential chronic health effects

Not available.

**Conclusion/Summary [Product]**: Not available.

General: May cause damage to organs through prolonged or repeated exposure. 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.

## 11.2 Information on other hazards

### 11.2.1 Endocrine disrupting properties

Not available.

**Conclusion/Summary [Product]**: The product does not meet the criteria to be considered as having endocrine

disrupting properties according to the criteria set out in either Regulation (EC)

No. 1907/2006 or Regulation (EC) No 1272/2008.

## 11.2.2 Other information

Not available.

# **SECTION 12: Ecological information**

## 12.1 Toxicity

Product/ingredient name

Acute - LC50 - Marine water

Propan-2-ol

Crustaceans - Common shrimp, sand shrimp - Crangon

crangon

1400000 µg/l [48 hours]

Effect: Mortality

Acute - LC50 - Fresh water

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Fish - Harlequinfish, red rasbora - Rasbora heteromorpha

Size: 1 to 3 cm

4200000 µg/l [96 hours]

Effect: Mortality

titanium dioxide

Acute - LC50 - Marine water

Fish - Mummichog - Fundulus heteroclitus

>1000000 µg/l [96 hours]

Effect: Mortality

Acute - LC50 - Fresh water

Crustaceans - Water flea - Ceriodaphnia dubia - Neonate

Age: <24 hours 3 mg/l [48 hours] Effect: Mortality

iso-butanol

Acute - LC50 - Fresh water

Fish - Rainbow trout, donaldson trout - Oncorhynchus mykiss

Weight: 1.67 g

1330000 µg/l [96 hours]

Effect: Mortality

Acute - LC50 - Marine water

Crustaceans - Brine shrimp - Artemia salina

600 mg/l [48 hours] Effect: Mortality

Trizinc bis(orthophosphate)

Acute - EC50

Crustaceans - Ceriodaphnia dubia

0.96 mg/l [48 hours]

Acute - EC50

Algae - Selenastrum capricornutum

0.32 mg/l [72 hours]

Butan-1-ol

Acute - LC50 - Fresh water

Fish - Fathead minnow - Pimephales promelas

Age: 33 days; Size: 20.6 mm; Weight: 0.119 g

1730000 μg/l [96 hours]

Effect: Mortality

Acute - EC50 - Fresh water

Daphnia - Water flea - Daphnia magna

Age: 6 to 24 hours 1983000 μg/l [48 hours] Effect: Intoxication

Phenol

Acute - LC50 - Fresh water

Fish - common carp - Cyprinus carpio - Larvae

Size: 8 mm

1.75 µg/l [96 hours] Effect: Mortality

Acute - LC50 - Marine water

Crustaceans - Opossum shrimp - Archaeomysis kokuboi -

Juvenile (Fledgling, Hatchling, Weanling)

800 μg/l [48 hours] Effect: Mortality

Chronic - NOEC - Fresh water

Fish - Rainbow trout, donaldson trout - Oncorhynchus mykiss

118 µg/l [90 days] Effect: Mortality

Acute - EC50 - Fresh water

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Zinc oxide

Formaldehyde

Algae - Green algae - Pseudokirchneriella subcapitata

Age: 4 to 7 days 61.1 µg/l [96 hours] Effect: Population

#### Chronic - NOEC - Fresh water

Daphnia - Water flea - Daphnia magna

Age: <24 hours 1.5 mg/l [21 days] Effect: Reproduction

#### **Chronic - NOEC - Marine water**

Algae - Neptune's Necklace - Hormosira banksii - Gamete

16 µg/l [72 hours] Effect: Development

#### Acute - LC50 - Fresh water

Daphnia - Water flea - Daphnia magna - Neonate

Age: <24 hours 98 µg/l [48 hours] Effect: Mortality

#### Acute - IC50 - Fresh water

Algae - Green algae - Pseudokirchneriella subcapitata -

Exponential growth phase

46 µg/l [72 hours] Effect: Population

#### Acute - LC50 - Fresh water

**US EPA** 

Fish - Rainbow trout, donaldson trout - Oncorhynchus mykiss

Weight: 0.78 g 1.1 ppm [96 hours] Effect: Mortality

## Acute - EC50 - Fresh water

Daphnia - Water flea - Daphnia pulex - Neonate

Age: <24 hours 5800 μg/l [48 hours] Effect: Intoxication

## Acute - EC50 - Marine water

Algae - Green algae - Ulva pertusa

0.788 mg/l [96 hours] Effect: Reproduction

#### Acute - LC50 - Fresh water

**US EPA** 

Fish - Rainbow trout, donaldson trout - Oncorhynchus mykiss

1.41 ppm [96 hours] Effect: Mortality

#### **Chronic - NOEC - Fresh water**

Fish - Chinook salmon - Oncorhynchus tshawytscha - Egg

953.9 ppm [43 days] Effect: Mortality

#### **Chronic - NOEC - Marine water**

Algae - Haptophyte - Isochrysis galbana - Exponential growth

phase

Age: 4 to 5 days 0.005 mg/l [96 hours] Effect: Population

**Conclusion/Summary [Product]**: Not available.

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## 12.2 Persistence and degradability

**Product/ingredient name** 

Result

iso-butanol

74% [28 days] - Readily

**Conclusion/Summary [Product]**: Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
so-butanol	-	-	Readily

## 12.3 Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
Propan-2-ol	0.05	-	Low
Xylene	3.12	8.1 to 25.9	Low
iso-butanol	1	-	Low
Trizinc bis(orthophosphate)	-	60960	High
Ethylbenzene	3.6	-	Low
reaction product: bisphenol-	2.64 to 3.78	31	Low
A-(epichlorhydrin); epoxy			
resin			
Butan-1-ol	1	-	Low
Phenol	1.47	647	High
Zinc oxide	-	28960	High

## 12.4 Mobility in soil

# Soil/water partition coefficient

Product/ingredient name	logKoc	Koc
Fropan-2-ol	0.54	3.4364
iso-butanol	1.08	12.0246
Ethylbenzene	2.23	170.406
Butan-1-ol	0.51	3.22078
Phenol	1.43	27.0339

## Results of PMT and vPvM assessment

Product/ingredient name	PMT	Р	M	T	vPvM	νP	vM
Propan-2-ol	No	No	No	No	No	No	No
Xylene	No	No	No	No	No	No	No
titanium dioxide	No	No	No	No	No	No	No
iso-butanol	No	No	No	No	No	No	No
Trizinc bis(orthophosphate)	No	No	No	No	No	No	No
Ethylbenzene	No	No	No	No	No	No	No
Urea-formaldehyde-polymer	No	No	No	No	No	No	No
reaction product: bisphenol-	No	No	No	No	No	No	No
A-(epichlorhydrin); epoxy resin							
Butan-1-ol	No	No	No	No	No	No	No
Phenol	No	No	No	No	No	No	No
Zinc oxide	No	No	No	No	No	No	No
Fatty acids, tall-oil, compds. with oleylamine	No	No	No	No	No	No	No
Formaldehyde	No	No	No	No	No	No	No

**Mobility** 

: Not available.

**Conclusion/Summary** 

: The product does not meet the criteria to be considered as a PMT or vPvM.

# 12.5 Results of PBT and vPvB assessment Regulation (EC) No. 1907/2006 [REACH]

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Product/ingredient name	PBT	P	В	Т	vPvB	νP	vB	
Fropan-2-ol	No	No	No	No	No	No	No	
Xylene	No	No	No	No	No	No	No	
titanium dioxide	No	No	No	No	No	No	No	
iso-butanol	No	No	No	No	No	No	No	
Trizinc bis(orthophosphate)	No	No	No	No	No	No	No	
Ethylbenzene	No	No	No	No	No	No	No	
Urea-formaldehyde-polymer	No	No	No	No	No	No	No	
reaction product: bisphenol-	No	No	No	No	No	No	No	
A-(epichlorhydrin); epoxy								
resin								
Butan-1-ol	No	No	No	No	No	No	No	
Phenol	No	No	No	No	No	No	No	
Zinc oxide	No	No	No	No	No	No	No	
Fatty acids, tall-oil, compds.	No	No	No	No	No	No	No	
with oleylamine								
Formaldehyde	No	No	No	No	No	No	No	

## Regulation (EC) No. 1272/2008 [CLP]

Product/ingredient name	PBT	P	В	Т	vPvB	vP	vB	
Propan-2-ol	No	No	No	No	No	No	No	
Xylene	No	No	No	No	No	No	No	
titanium dioxide	No	No	No	No	No	No	No	
iso-butanol	No	No	No	No	No	No	No	
Trizinc bis(orthophosphate)	No	No	No	No	No	No	No	
Ethylbenzene	No	No	No	No	No	No	No	
Urea-formaldehyde-polymer	No	No	No	No	No	No	No	
reaction product: bisphenol-	No	No	No	No	No	No	No	
A-(epichlorhydrin); epoxy								
resin								
Butan-1-ol	No	No	No	No	No	No	No	
Phenol	No	No	No	No	No	No	No	
Zinc oxide	No	No	No	No	No	No	No	
Fatty acids, tall-oil, compds.	No	No	No	No	No	No	No	
with oleylamine								
Formaldehyde	No	No	No	No	No	No	No	

Conclusion/Summary Regulation (EC) No. 1272/2008 [CLP] : The product does not meet the criteria to be considered as a PBT or vPvB.

## 12.6 Endocrine disrupting properties

Not available.

**Conclusion/Summary [Product]** 

: The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

#### 12.7 Other adverse effects

No known significant effects or critical hazards.

# **SECTION 13: Disposal considerations**

#### 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.

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# **SECTION 13: Disposal considerations**

**European waste** catalogue (EWC) : 080111\*, 200127\*

**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 or ID number	UN1263	UN1263	UN1263	UN1263
14.2 UN proper shipping name	PAINT	PAINT	PAINT	PAINT
14.3 Transport hazard class(es)	3	3	3	3
14.4 Packing group	II	II	II	II
14.5 Environmental hazards	Yes.	Yes.	Yes.	Yes. The environmentally hazardous substance mark is not required.

## **Additional information**

ADR/RID

: The environmentally hazardous substance mark is not required when transported in

sizes of ≤5 L or ≤5 kg. Special provisions 640 (C)

Tunnel code (D/E)

**ADN** 

: The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.

Special provisions 640 (C)

**IMDG** 

: The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.

**IATA** 

The environmentally hazardous substance mark may appear if required by other

transportation regulations.

user

14.6 Special precautions for : 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 Maritime transport in bulk according to IMO instruments

: Not relevant/applicable due to nature of the product.

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# **SECTION 15: Regulatory information**

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU Regulation (EC) No. 1907/2006 (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

Product/ingredient name	%	Designation [Usage]
<b>K</b> ORRO PVB	≥90	3
Formaldehyde	<0.1	72

Labelling

Other EU regulations

**Industrial emissions** : Not listed

(integrated pollution prevention and control) -

Air

**Industrial emissions** : Not listed

(integrated pollution prevention and control) -

Water

: Not applicable. **Explosive precursors** Ozone depleting substances (EU 2024/590)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

**Persistent Organic Pollutants** 

Not listed.

## **Seveso Directive**

This product is controlled under the Seveso Directive.

### **Danger criteria**

# Category

P<sub>5</sub>c

E2

#### 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.

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

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

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

CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No.

1272/2008]

DMEL = Derived Minimal Effect Level DNEL = Derived No Effect Level

EUH statement = 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 according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Flam. Liq. 2, H225 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 STOT SE 3, H335 STOT SE 3, H336 STOT RE 2, H373	On basis of test data Calculation method
Aquatic Chronic 2, H411	Calculation method

## Full text of abbreviated H statements

<b>⊮</b> 225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
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.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H351	Suspected of causing cancer.
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.
H413	May cause long lasting harmful effects to aquatic life.

## Full text of classifications [CLP/GHS]

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# SECTION 16: Other information

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 4 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 4

Asp. Tox. 1 ASPIRATION HAZARD - Category 1 **CARCINOGENICITY - Category 1B** Carc. 1B Carc. 2 **CARCINOGENICITY - Category 2** 

Eye Dam. 1 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1 Eye Irrit. 2 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2

Flam. Liq. 2 FLAMMABLE LIQUIDS - Category 2 Flam. Liq. 3 FLAMMABLE LIQUIDS - Category 3 Muta. 2 GERM CELL MUTAGENICITY - Category 2 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 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**

The information in this SDS is based on the present state of our knowledge and on current laws. The product is not to be used for purposes other than those specified under section 1 without first obtaining written handling instructions. It is always the responsibility of the user to take all necessary steps to fulfil the demands set out in the local rules and legislation. The information in this SDS is meant to be a description of the safety requirements for our product. It is not to be considered a guarantee of the product's properties.

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