

# SAFETY DATA SHEET



TEKNOZINC 50 SE - All variants

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

### 1.1 Product identifier

**Product name** : TEKNOZINC 50 SE - 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 responsible for this SDS** : Prod-safe@teknos.com

#### National contact

Teknos (UK) Limited, 7 Longlands Rd, Bicester, Oxfordshire OX26 5AH, United Kingdom. Tel. +44 (0) 1869 208005.

### 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 UK CLP/GHS

Flam. Liq. 2, H225

Skin Irrit. 2, H315

Eye Irrit. 2, H319

Skin Sens. 1, H317

STOT RE 2, H373

Aquatic Acute 1, H400

Aquatic Chronic 1, H410

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

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

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

### 2.2 Label elements

**Hazard pictograms** :



**Signal word** : Danger

**Hazard statements** : H225 - Highly flammable liquid and vapour.  
H315 - Causes skin irritation.  
H317 - May cause an allergic skin reaction.  
H319 - Causes serious eye irritation.  
H373 - May cause damage to organs through prolonged or repeated exposure.  
H410 - Very toxic to aquatic life with long lasting effects.

#### Precautionary statements

## SECTION 2: Hazards identification

<b>Prevention</b>	: P280 - Wear protective gloves. Wear eye or face protection. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P273 - Avoid release to the environment. P260 - Do not breathe vapour.
<b>Response</b>	: P391 - Collect spillage.
<b>Storage</b>	: Not applicable.
<b>Disposal</b>	: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
<b>Supplemental label elements</b>	:
<b>Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles</b>	: Not applicable.

### 2.3 Other hazards

<b>Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII</b>	: This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
<b>Other hazards which do not result in classification</b>	: None known.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures : Mixture

Product/ingredient name	Identifiers	%	Classification	Type
Zinc powder - zinc dust (stabilized)	REACH #: 01-2119467174-37 EC: 231-175-3 CAS: 7440-66-6	≥25 - ≤50	Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1]
Trizinc bis(orthophosphate)	REACH #: 01-2119485044-40 EC: 231-944-3 CAS: 7779-90-0 Index: 030-011-00-6	≥10 - ≤25	Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1]
Xylene	REACH #: 01-2119488216-32 EC: 215-535-7 CAS: 1330-20-7 Index: 601-022-00-9	≥10 - ≤17	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)	[1] [2]
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin	EC: 500-033-5 CAS: 25068-38-6	≤10	Asp. Tox. 1, H304 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411	[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)	[1] [2]
iso-butanol	REACH #: 01-2119484609-23	≤2.3	Asp. Tox. 1, H304 Flam. Liq. 3, H226 Skin Irrit. 2, H315	[1] [2]

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**Label No** : 77661

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1-Methoxy 2-propanol	EC: 201-148-0 CAS: 78-83-1 Index: 603-108-00-1 REACH #: 01-2119457435-35 EC: 203-539-1 CAS: 107-98-2 Index: 603-064-00-3	≤3	Eye Dam. 1, H318 STOT SE 3, H335 STOT SE 3, H336 Flam. Liq. 3, H226 STOT SE 3, H336	[1] [2]
Zinc oxide	REACH #: 01-2119463881-32 EC: 215-222-5 CAS: 1314-13-2 Index: 030-013-00-7	≤1	Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1]
2-Methoxy-1-methylethyl acetate	REACH #: 01-2119475791-29 EC: 203-603-9 CAS: 108-65-6 Index: 607-195-00-7	≤0.3	Flam. Liq. 3, H226 STOT SE 3, H336	[1] [2]
Fatty acids, C18-unsatd., trimers, compds. with oleylamine	REACH #: 01-2119971821-33 CAS: 147900-93-4	≤0.3	Acute Tox. 4, H302 Skin Sens. 1, H317 STOT RE 2, H373 Aquatic Chronic 2, H411	[1]
Toluene	REACH #: 01-2119471310-51 EC: 203-625-9 CAS: 108-88-3 Index: 601-021-00-3	≤0.1	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361d STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304 Flam. Liq. 2, H225 Eye Irrit. 2, H319	[1] [2]
Ethanol	REACH #: 01-2119457610-43 EC: 200-578-6 CAS: 64-17-5 Index: 603-002-00-5	≤0.1	Eye Irrit. 2, H319	[1] [2]
Propylene glycol	REACH #: 01-2119456809-23 EC: 200-338-0 CAS: 57-55-6	≤0.1	Not classified.	[2]
Formaldehyde	REACH #: 01-2119488953-20 EC: 200-001-8 CAS: 50-00-0 Index: 605-001-00-5	<0.1	Acute Tox. 3, H301 Acute Tox. 3, H311 Acute Tox. 2, H330 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Muta. 2, H341 Carc. 1B, H350 STOT SE 3, H335 Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336	[1] [2]
Propan-2-ol	REACH #: 01-2119457558-25 EC: 200-661-7 CAS: 67-63-0 Index: 603-117-00-0	≤0.1	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336	[1] [2]
Butanone	REACH #: 01-2119457290-43 EC: 201-159-0 CAS: 78-93-3 Index: 606-002-00-3	≤0.1	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH066	[1] [2]
			<b>See Section 16 for the full text of the H statements declared above.</b>	

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.

## SECTION 3: Composition/information on ingredients

### 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 following exposure or if feeling unwell. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention following exposure or if feeling unwell. 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. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

### 4.2 Most important symptoms and effects, both acute and delayed

#### Over-exposure signs/symptoms

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

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

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

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

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

### 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 very 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  
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.

## SECTION 6: Accidental release measures

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

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

### 6.2 Environmental precautions

- : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. 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. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see Section 1 for

## SECTION 6: Accidental release measures

emergency contact information and Section 13 for waste disposal.

### 6.4 Reference to other sections

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

## SECTION 7: Handling and storage

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

### 7.1 Precautions for safe handling

#### Protective measures

- : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not 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

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. 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.

#### Seveso Directive - Reporting thresholds

##### Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
P5c E1	5000 tonne 100 tonne	50000 tonne 200 tonne

### 7.3 Specific end use(s)

#### Recommendations

- : Not available.

#### Industrial sector specific solutions

- : Not available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

Xylene

**EH40/2005 WELs (United Kingdom (UK), 1/2020).** [xylene, o-,m-, p- or mixed isomers] Absorbed through skin.

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

TWA: 50 ppm 8 hours.

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

STEL: 100 ppm 15 minutes.

Ethylbenzene

**EH40/2005 WELs (United Kingdom (UK), 1/2020).** Absorbed through skin.

## SECTION 8: Exposure controls/personal protection

	<p>STEL: 552 mg/m<sup>3</sup> 15 minutes.          STEL: 125 ppm 15 minutes.          TWA: 100 ppm 8 hours.          TWA: 441 mg/m<sup>3</sup> 8 hours.</p>
iso-butanol	<p><b>EH40/2005 WELs (United Kingdom (UK), 1/2020).</b>          STEL: 231 mg/m<sup>3</sup> 15 minutes.          STEL: 75 ppm 15 minutes.          TWA: 154 mg/m<sup>3</sup> 8 hours.          TWA: 50 ppm 8 hours.</p>
1-Methoxy 2-propanol	<p><b>EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin.</b>          STEL: 560 mg/m<sup>3</sup> 15 minutes.          STEL: 150 ppm 15 minutes.          TWA: 375 mg/m<sup>3</sup> 8 hours.          TWA: 100 ppm 8 hours.</p>
2-Methoxy-1-methylethyl acetate	<p><b>EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin.</b>          STEL: 548 mg/m<sup>3</sup> 15 minutes.          TWA: 50 ppm 8 hours.          TWA: 274 mg/m<sup>3</sup> 8 hours.          STEL: 100 ppm 15 minutes.</p>
Toluene	<p><b>EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin.</b>          STEL: 384 mg/m<sup>3</sup> 15 minutes.          TWA: 191 mg/m<sup>3</sup> 8 hours.          TWA: 50 ppm 8 hours.          STEL: 100 ppm 15 minutes.</p>
Ethanol	<p><b>EH40/2005 WELs (United Kingdom (UK), 1/2020).</b>          TWA: 1000 ppm 8 hours.          TWA: 1920 mg/m<sup>3</sup> 8 hours.</p>
Propylene glycol	<p><b>EH40/2005 WELs (United Kingdom (UK), 1/2020).</b>          TWA: 10 mg/m<sup>3</sup> 8 hours. Form: Particulate          TWA: 474 mg/m<sup>3</sup> 8 hours. Form: total vapour and particulates          TWA: 150 ppm 8 hours. Form: total vapour and particulates</p>
Formaldehyde	<p><b>EH40/2005 WELs (United Kingdom (UK), 1/2020).</b>          STEL: 2.5 mg/m<sup>3</sup> 15 minutes.          STEL: 2 ppm 15 minutes.          TWA: 2 ppm 8 hours.          TWA: 2.5 mg/m<sup>3</sup> 8 hours.</p>
Propan-2-ol	<p><b>EH40/2005 WELs (United Kingdom (UK), 1/2020).</b>          STEL: 1250 mg/m<sup>3</sup> 15 minutes.          STEL: 500 ppm 15 minutes.          TWA: 999 mg/m<sup>3</sup> 8 hours.          TWA: 400 ppm 8 hours.</p>
Butanone	<p><b>EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin.</b>          STEL: 899 mg/m<sup>3</sup> 15 minutes.          STEL: 300 ppm 15 minutes.          TWA: 600 mg/m<sup>3</sup> 8 hours.          TWA: 200 ppm 8 hours.</p>

### Biological exposure indices

Product/ingredient name	Exposure indices
Xylene	<p><b>EH40/2005 BMGVs (United Kingdom (UK), 8/2018) [Xylene, o-, m-, p- or mixed isomers]</b>            BGV: 650 mmol/mol creatinine, methyl hippuric acid [in urine].            Sampling time: post shift.</p>
Butanone	<p><b>EH40/2005 BMGVs (United Kingdom (UK), 8/2018)</b>            BGV: 70 µmol/l, butan-2-one [in urine]. Sampling time: post shift.</p>

**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.

## SECTION 8: Exposure controls/personal protection

### DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects	
Zinc powder - zinc dust (stabilized)	DNEL	Long term Oral	0.83 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Inhalation	2.5 mg/m <sup>3</sup>	General population	Systemic	
	DNEL	Long term Inhalation	5 mg/m <sup>3</sup>	Workers	Systemic	
	DNEL	Long term Dermal	83 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Dermal	83 mg/kg bw/day	Workers	Systemic	
Trizinc bis(orthophosphate)	DNEL	Long term Oral	0.83 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Inhalation	2.5 mg/m <sup>3</sup>	General population	Systemic	
	DNEL	Long term Inhalation	5 mg/m <sup>3</sup>	Workers	Systemic	
	DNEL	Long term Dermal	83 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Dermal	83 mg/kg bw/day	Workers	Systemic	
Xylene	DNEL	Long term Inhalation	65.3 mg/m <sup>3</sup>	General population	Local	
	DNEL	Short term Inhalation	260 mg/m <sup>3</sup>	General population	Local	
	DNEL	Short term Inhalation	260 mg/m <sup>3</sup>	General population	Systemic	
	DNEL	Long term Inhalation	221 mg/m <sup>3</sup>	Workers	Local	
	DNEL	Long term Oral	12.5 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Inhalation	65.3 mg/m <sup>3</sup>	General population	Systemic	
	DNEL	Long term Dermal	125 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Dermal	212 mg/kg bw/day	Workers	Systemic	
	DNEL	Long term Inhalation	221 mg/m <sup>3</sup>	Workers	Systemic	
	DNEL	Short term Inhalation	442 mg/m <sup>3</sup>	Workers	Local	
	DNEL	Short term Inhalation	442 mg/m <sup>3</sup>	Workers	Systemic	
	Ethylbenzene	DNEL	Long term Oral	1.6 mg/kg bw/day	General population	Systemic
		DNEL	Long term Inhalation	15 mg/m <sup>3</sup>	General population	Systemic
		DNEL	Long term Inhalation	77 mg/m <sup>3</sup>	Workers	Systemic
		DNEL	Long term Dermal	180 mg/kg bw/day	Workers	Systemic
DNEL		Short term Inhalation	293 mg/m <sup>3</sup>	Workers	Local	
DMEL		Long term Inhalation	442 mg/m <sup>3</sup>	Workers	Local	
DMEL		Short term Inhalation	884 mg/m <sup>3</sup>	Workers	Systemic	
iso-butanol		DNEL	Long term Inhalation	55 mg/m <sup>3</sup>	General population	Local
	DNEL	Long term Inhalation	310 mg/m <sup>3</sup>	Workers	Local	
1-Methoxy 2-propanol	DNEL	Long term Oral	33 mg/kg bw/day	General population	Systemic	
	DNEL	Long term	43.9 mg/m <sup>3</sup>	General	Systemic	



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Zinc oxide	DNEL	Inhalation Long term Dermal	78 mg/kg bw/day	population General population	Systemic	
	DNEL	Long term Dermal	183 mg/kg bw/day	Workers	Systemic	
	DNEL	Long term Inhalation	369 mg/m <sup>3</sup>	Workers	Systemic	
	DNEL	Short term Inhalation	553.5 mg/ m <sup>3</sup>	Workers	Local	
	DNEL	Short term Inhalation	553.5 mg/ m <sup>3</sup>	Workers	Systemic	
	DNEL	Long term Inhalation	0.5 mg/m <sup>3</sup>	Workers	Local	
	DNEL	Long term Oral	0.83 mg/ kg bw/day	General population	Systemic	
	DNEL	Long term Inhalation	2.5 mg/m <sup>3</sup>	General population	Systemic	
	DNEL	Long term Inhalation	5 mg/m <sup>3</sup>	Workers	Systemic	
	DNEL	Long term Dermal	83 mg/kg bw/day	General population	Systemic	
2-Methoxy-1-methylethyl acetate	DNEL	Long term Dermal	83 mg/kg bw/day	Workers	Systemic	
	DNEL	Long term Inhalation	33 mg/m <sup>3</sup>	General population	Local	
	DNEL	Long term Inhalation	33 mg/m <sup>3</sup>	General population	Systemic	
	DNEL	Long term Oral	36 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Inhalation	275 mg/m <sup>3</sup>	Workers	Systemic	
	DNEL	Long term Dermal	320 mg/kg bw/day	General population	Systemic	
	DNEL	Short term Inhalation	550 mg/m <sup>3</sup>	Workers	Local	
	DNEL	Long term Dermal	796 mg/kg bw/day	Workers	Systemic	
	Fatty acids, C18-unsatd., trimers, compds. with oleylamine	DNEL	Long term Oral	0.012 mg/ kg bw/day	General population	Systemic
		DNEL	Long term Dermal	0.012 mg/ kg bw/day	General population	Systemic
DNEL		Long term Dermal	0.024 mg/ kg bw/day	Workers	Systemic	
Toluene	DNEL	Long term Oral	8.13 mg/ kg bw/day	General population	Systemic	
	DNEL	Long term Inhalation	56.5 mg/m <sup>3</sup>	General population	Local	
	DNEL	Long term Inhalation	56.5 mg/m <sup>3</sup>	General population	Systemic	
	DNEL	Long term Inhalation	192 mg/m <sup>3</sup>	Workers	Local	
	DNEL	Long term Inhalation	192 mg/m <sup>3</sup>	Workers	Systemic	
	DNEL	Long term Dermal	226 mg/kg bw/day	General population	Systemic	
	DNEL	Short term Inhalation	226 mg/m <sup>3</sup>	General population	Local	
	DNEL	Short term Inhalation	226 mg/m <sup>3</sup>	General population	Systemic	
	DNEL	Long term Dermal	384 mg/kg bw/day	Workers	Systemic	
	DNEL	Short term Inhalation	384 mg/m <sup>3</sup>	Workers	Local	
Ethanol	DNEL	Short term Inhalation	384 mg/m <sup>3</sup>	Workers	Systemic	
	DNEL	Long term Oral	87 mg/kg	General	Systemic	

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Propylene glycol	DNEL	Long term Inhalation	bw/day 114 mg/m <sup>3</sup>	population General population	Systemic
	DNEL	Long term Dermal	206 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	343 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	950 mg/m <sup>3</sup>	General population	Local
	DNEL	Long term Inhalation	950 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Short term Inhalation	1900 mg/ m <sup>3</sup>	Workers	Local
	DNEL	Long term Inhalation	10 mg/m <sup>3</sup>	General population	Local
	DNEL	Long term Inhalation	10 mg/m <sup>3</sup>	Workers	Local
	DNEL	Long term Inhalation	50 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Inhalation	168 mg/m <sup>3</sup>	Workers	Systemic
Formaldehyde	DNEL	Long term Inhalation	0.375 mg/ m <sup>3</sup>	Workers	Local
	DNEL	Short term Inhalation	0.75 mg/m <sup>3</sup>	Workers	Local
	DNEL	Long term Dermal	12 µg/cm <sup>2</sup>	General population	Local
	DNEL	Long term Dermal	37 µg/cm <sup>2</sup>	Workers	Local
	DNEL	Long term Inhalation	0.1 mg/m <sup>3</sup>	General population	Local
	DNEL	Long term Inhalation	3.2 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Oral	4.1 mg/kg	General population	Systemic
	DNEL	Long term Inhalation	bw/day 9 mg/m <sup>3</sup>	General population Workers	Systemic
	DNEL	Long term Dermal	102 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	240 mg/kg bw/day	Workers	Systemic
Propan-2-ol	DNEL	Long term Oral	26 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	89 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Dermal	319 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	500 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Dermal	888 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Oral	31 mg/kg	General population	Systemic
	DNEL	Long term Inhalation	106 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Dermal	412 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	600 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Dermal	1161 mg/ kg bw/day	Workers	Systemic
Butanone	DNEL	Long term Oral	31 mg/kg	General population	Systemic
	DNEL	Long term Inhalation	106 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Dermal	412 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	600 mg/m <sup>3</sup>	Workers	Systemic
DNEL	Long term Dermal	1161 mg/ kg bw/day	Workers	Systemic	

### PNECs

No PNECs available

### 8.2 Exposure controls

## SECTION 8: Exposure controls/personal protection

**Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

### Individual protection measures

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

### 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

> 8 hours (breakthrough time): 4H / Silver Shield® 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.

**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.

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## SECTION 9: Physical and chemical properties

**Initial boiling point and boiling range** :

Ingredient name	°C	°F	Method
iso-butanol	108	226.4	OECD 103
1-Methoxy 2-propanol	120.17	248.3	OECD 103

**Flammability (solid, gas)** : Not available.

**Upper/lower flammability or explosive limits** : Lower: 0.8%  
Upper: 6.7%

**Flash point** : Closed cup: 22°C (71.6°F)

**Auto-ignition temperature** :

Ingredient name	°C	°F	Method
1-Methoxy 2-propanol	270	518	
iso-butanol	415	779	

**Decomposition temperature** : Not available.

**pH** : Not applicable.

**Viscosity** : Kinematic (40°C): >20.5 mm<sup>2</sup>/s

**Solubility(ies)** :

Not available.

**Solubility in water** : Not available.

**Partition coefficient: n-octanol/ water** : Not applicable.

**Vapour pressure** :

Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
iso-butanol	<12.00102	<1.6	DIN EN 13016-2			
Ethylbenzene	9.30076	1.2				

**Relative density** : Not available.

**Density** : 2.2 g/cm<sup>3</sup>

**Vapour density** : Not available.

**Explosive properties** : Not available.

**Oxidising properties** : Not available.

### Particle characteristics

**Median particle size** : 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

## SECTION 10: Stability and reactivity

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

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Xylene	LC50 Inhalation Vapour	Rat	21.7 mg/l	4 hours
	LD50 Oral	Rat	4300 mg/kg	-
Ethylbenzene	LC50 Inhalation Dusts and mists	Rat	29000 mg/l	4 hours
	LD50 Dermal	Rabbit	15400 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-
iso-butanol	LC50 Inhalation Vapour	Rat	19200 mg/m <sup>3</sup>	4 hours
	LD50 Dermal	Rabbit	3400 mg/kg	-
	LD50 Oral	Rat	2460 mg/kg	-
1-Methoxy 2-propanol	LD50 Dermal	Rabbit	13 g/kg	-
	LD50 Oral	Rat	6600 mg/kg	-
2-Methoxy-1-methylethyl acetate	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	8532 mg/kg	-
Toluene	LC50 Inhalation Vapour	Rat	49 g/m <sup>3</sup>	4 hours
	LD50 Oral	Rat	636 mg/kg	-
Ethanol	LC50 Inhalation Vapour	Rat	124700 mg/m <sup>3</sup>	4 hours
	LD50 Oral	Rat	7 g/kg	-
Propylene glycol	LD50 Dermal	Rabbit	20800 mg/kg	-
	LD50 Oral	Rat	20 g/kg	-
Formaldehyde	LC50 Inhalation Gas.	Rat	250 ppm	4 hours
	LD50 Dermal	Rabbit	270 mg/kg	-
	LD50 Oral	Rat	100 mg/kg	-
Propan-2-ol	LD50 Dermal	Rabbit	12800 mg/kg	-
	LD50 Oral	Rat	5000 mg/kg	-
Butanone	LD50 Dermal	Rabbit	6480 mg/kg	-
	LD50 Oral	Rat	2737 mg/kg	-

**Conclusion/Summary** : Based on available data, the classification criteria are not met.

#### Acute toxicity estimates

Route	ATE value
Dermal	7598.11 mg/kg
Inhalation (vapours)	62.33 mg/l

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Zinc powder - zinc dust (stabilized)	Skin - Mild irritant	Human	-	72 hours 300 ug l	-
Xylene	Eyes - Mild irritant	Rabbit	-	87 mg	-
	Eyes - Severe irritant	Rabbit	-	24 hours 5 mg	-
	Skin - Mild irritant	Rat	-	8 hours 60 uL	-
	Skin - Moderate irritant	Rabbit	-	100 %	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 mg	-
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin	Eyes - Mild irritant	Rabbit	-	100 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 uL	-
	Skin - Severe irritant	Rabbit	-	24 hours 2 mg	-
Ethylbenzene	Eyes - Severe irritant	Rabbit	-	500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 15 mg	-
1-Methoxy 2-propanol	Eyes - Mild irritant	Rabbit	-	24 hours 500	-

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## SECTION 11: Toxicological information

Zinc oxide	Skin - Mild irritant	Rabbit	-	mg	-
	Eyes - Mild irritant	Rabbit	-	500 mg	-
Toluene	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Eyes - Mild irritant	Rabbit	-	0.5 minutes	-
	Eyes - Mild irritant	Rabbit	-	100 mg	-
	Eyes - Severe irritant	Rabbit	-	870 ug	-
	Skin - Mild irritant	Pig	-	24 hours 2 mg	-
Ethanol	Skin - Mild irritant	Rabbit	-	24 hours 250 uL	-
	Skin - Moderate irritant	Rabbit	-	435 mg	-
	Eyes - Mild irritant	Rabbit	-	24 hours 20 mg	-
	Eyes - Moderate irritant	Rabbit	-	500 mg	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 500 mg	-
Propylene glycol	Eyes - Moderate irritant	Rabbit	-	0.06666667 minutes	-
	Eyes - Severe irritant	Rabbit	-	100 mg	-
	Skin - Mild irritant	Rabbit	-	100 uL	-
	Skin - Moderate irritant	Rabbit	-	500 mg	-
	Eyes - Mild irritant	Rabbit	-	400 mg	-
	Eyes - Mild irritant	Rabbit	-	24 hours 20 mg	-
	Skin - Mild irritant	Human	-	100 mg	-
	Skin - Mild irritant	Woman	-	24 hours 500 mg	-
Formaldehyde	Skin - Moderate irritant	Child	-	168 hours 500 mg	-
	Skin - Moderate irritant	Human	-	96 hours 30 %	-
	Eyes - Mild irritant	Human	-	96 hours 30 % C	-
	Eyes - Severe irritant	Human	-	72 hours 104 mg l	-
	Eyes - Severe irritant	Rabbit	-	6 minutes 1 ppm	-
	Skin - Mild irritant	Rabbit	-	24 hours 750 ug	-
	Skin - Moderate irritant	Rabbit	-	750 ug	-
	Skin - Moderate irritant	Human	-	72 hours 150 ug l	-
	Skin - Severe irritant	Rabbit	-	540 mg	-
	Skin - Severe irritant	Rabbit	-	24 hours 50 mg	-
Propan-2-ol	Skin - Severe irritant	Human	-	0.01 %	-
	Eyes - Moderate irritant	Rabbit	-	0.8 %	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 2 mg	-
Butanone	Eyes - Severe irritant	Rabbit	-	10 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 100 mg	-
	Skin - Mild irritant	Rabbit	-	100 mg	-
	Skin - Moderate irritant	Rabbit	-	500 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 14 mg	-
			-	24 hours 500 mg	-

**Conclusion/Summary** : Causes skin irritation.

### Sensitisation

**Conclusion/Summary** : May cause an allergic skin reaction.

## SECTION 11: Toxicological information

### Mutagenicity

**Conclusion/Summary** : Based on available data, the classification criteria are not met.

### Carcinogenicity

**Conclusion/Summary** : Based on available data, the classification criteria are not met.

### Reproductive toxicity

**Conclusion/Summary** : Based on available data, the classification criteria are not met.

### Teratogenicity

**Conclusion/Summary** : Based on available data, the classification criteria are not met.

### Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Xylene	Category 3	-	Respiratory tract irritation
iso-butanol	Category 3	-	Respiratory tract irritation
1-Methoxy 2-propanol	Category 3	-	Narcotic effects
2-Methoxy-1-methylethyl acetate	Category 3	-	Narcotic effects
Toluene	Category 3	-	Narcotic effects
Formaldehyde	Category 3	-	Respiratory tract irritation
Propan-2-ol	Category 3	-	Narcotic effects
Butanone	Category 3	-	Narcotic effects

### Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Xylene	Category 2	oral, inhalation	-
Ethylbenzene	Category 2	oral, inhalation	hearing organs
Fatty acids, C18-unsatd., trimers, compds. with oleylamine	Category 2	-	-
Toluene	Category 2	-	-

### Aspiration hazard

Product/ingredient name	Result
Xylene	ASPIRATION HAZARD - Category 1
Ethylbenzene	ASPIRATION HAZARD - Category 1
Toluene	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** : Causes skin irritation. May cause an allergic skin reaction.

**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** : Adverse symptoms may include the following:  
irritation  
redness

**Ingestion** : No specific data.

## SECTION 11: Toxicological information

### 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

Not available.

**Conclusion/Summary** : 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.

**Other information** : Not available.

## SECTION 12: Ecological information

### 12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
Zinc powder - zinc dust (stabilized)	Acute EC50 106 µg/l Fresh water	Algae - Green algae - <i>Pseudokirchneriella subcapitata</i> - Exponential growth phase	72 hours
	Acute EC50 10000 µg/l Fresh water	Aquatic plants - Duckweed - <i>Lemna minor</i>	4 days
	Acute IC50 65 µg/l Marine water	Algae - Diatom - <i>Nitzschia closterium</i> - Exponential growth phase	4 days
	Acute LC50 65 µg/l Fresh water	Crustaceans - Water flea - <i>Ceriodaphnia dubia</i> - Neonate	48 hours
	Acute LC50 68 µg/l Fresh water	Daphnia - Water flea - <i>Daphnia magna</i>	48 hours
	Acute LC50 12.21 µg/l Marine water	Fish - Mudskipper - <i>Periophthalmus waltoni</i> - Adult	96 hours
	Chronic EC10 27.3 µg/l Fresh water	Algae - Green algae - <i>Pseudokirchneriella subcapitata</i> - Exponential growth phase	72 hours
	Chronic EC10 59.2 µg/l Fresh water	Daphnia - Water flea - <i>Daphnia magna</i>	21 days
	Chronic NOEC 9 mg/l Fresh water	Aquatic plants - Coontail - <i>Ceratophyllum demersum</i>	3 days
	Chronic NOEC 178 µg/l Marine water	Crustaceans - Rockpool prawn - <i>Palaemon elegans</i>	21 days
	Chronic NOEC 2.6 µg/l Fresh water	Fish - common carp - <i>Cyprinus carpio</i>	4 weeks
Trizinc bis(orthophosphate)	Acute EC50 0.32 mg/l	Algae - <i>Selenastrum capricornutum</i>	72 hours
	Acute EC50 0.96 mg/l	Crustaceans - <i>Ceriodaphnia dubia</i>	48 hours
iso-butanol	Acute LC50 600 mg/l Marine water	Crustaceans - Brine shrimp - <i>Artemia salina</i>	48 hours
	Acute LC50 1030000 µg/l Fresh water	Daphnia - Water flea - <i>Daphnia magna</i> - Neonate	48 hours

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## SECTION 12: Ecological information

Zinc oxide	Acute LC50 1330000 µg/l Fresh water	Fish - Rainbow trout,donaldson trout - <i>Oncorhynchus mykiss</i>	96 hours
	Acute IC50 46 µg/l Fresh water	Algae - Green algae - <i>Pseudokirchneriella subcapitata</i> - Exponential growth phase	72 hours
	Acute IC50 1.85 mg/l Marine water	Algae - Diatom - <i>Skeletonema costatum</i>	96 hours
	Acute LC50 98 µg/l Fresh water	Daphnia - Water flea - <i>Daphnia magna</i> - Neonate	48 hours
Toluene	Acute LC50 1.1 ppm Fresh water	Fish - Rainbow trout,donaldson trout - <i>Oncorhynchus mykiss</i>	96 hours
	Acute EC50 12500 µg/l Fresh water	Algae - Green algae - <i>Pseudokirchneriella subcapitata</i>	72 hours
	Acute EC50 11600 µg/l Fresh water	Crustaceans - Scud - <i>Gammarus pseudolimnaeus</i> - Adult	48 hours
	Acute EC50 5.56 mg/l Fresh water	Daphnia - Water flea - <i>Daphnia magna</i> - Neonate	48 hours
Ethanol	Acute LC50 5500 µg/l Fresh water	Fish - Coho salmon,silver salmon - <i>Oncorhynchus kisutch</i> - Fry	96 hours
	Chronic NOEC 1000 µg/l Fresh water	Daphnia - Water flea - <i>Daphnia magna</i>	21 days
	Acute EC50 17.921 mg/l Marine water	Algae - Green algae - <i>Ulva pertusa</i>	96 hours
	Acute EC50 2000 µg/l Fresh water	Daphnia - Water flea - <i>Daphnia magna</i>	48 hours
	Acute LC50 25500 µg/l Marine water	Crustaceans - San Francisco Brine Shrimp - <i>Artemia franciscana</i> - Larvae	48 hours
	Acute LC50 42000 µg/l Fresh water	Fish - Rainbow trout,donaldson trout - <i>Oncorhynchus mykiss</i>	4 days
	Chronic NOEC 4.995 mg/l Marine water	Algae - Green algae - <i>Ulva pertusa</i>	96 hours
	Chronic NOEC 100 ul/L Fresh water	Daphnia - Water flea - <i>Daphnia magna</i> - Neonate	21 days
	Chronic NOEC 0.375 ul/L Fresh water	Fish - Eastern mosquitofish - <i>Gambusia holbrooki</i> - Larvae	12 weeks
	Propylene glycol	Acute EC50 19300 mg/l Fresh water	Algae - Algae
Acute EC50 43500 mg/l Fresh water		Daphnia - Daphnia - <i>Daphnia magna</i>	48 hours
Acute LC50 18340000 µg/l Fresh water		Crustaceans - Water flea - <i>Ceriodaphnia dubia</i>	48 hours
Acute LC50 40613 mg/l Fresh water		Fish - Trout - <i>Oncorhynchus mykiss</i>	96 hours
Formaldehyde	Acute EC50 3.48 mg/l Fresh water	Algae - Green algae - <i>Desmodesmus subspicatus</i>	72 hours
	Acute EC50 0.788 mg/l Marine water	Algae - Green algae - <i>Ulva pertusa</i>	96 hours
	Acute EC50 12.98 mg/l Fresh water	Crustaceans - Water flea - <i>Ceriodaphnia dubia</i> - Neonate	48 hours
	Acute EC50 5800 µg/l Fresh water	Daphnia - Water flea - <i>Daphnia pulex</i> - Neonate	48 hours
	Acute LC50 1.41 ppm Fresh water	Fish - Rainbow trout,donaldson trout - <i>Oncorhynchus mykiss</i>	96 hours
	Chronic NOEC 0.005 mg/l Marine water	Algae - Haptophyte - <i>Isochrysis galbana</i> - Exponential growth phase	96 hours
	Chronic NOEC 953.9 ppm Fresh water	Fish - Chinook salmon - <i>Oncorhynchus tshawytscha</i> - Egg	43 days
	Propan-2-ol	Acute EC50 10100 mg/l Fresh water	Daphnia - Water flea - <i>Daphnia magna</i>
Acute LC50 1400000 µg/l Marine water		Crustaceans - Common shrimp, sand shrimp - <i>Crangon crangon</i>	48 hours

## SECTION 12: Ecological information

Butanone	Acute LC50 4200000 µg/l Fresh water	Fish - Harlequinfish, red rasbora - <i>Rasbora heteromorpha</i>	96 hours
	Acute EC50 >500000 µg/l Marine water	Algae - Diatom - <i>Skeletonema costatum</i>	96 hours
	Acute EC50 5091000 µg/l Fresh water	Daphnia - Water flea - <i>Daphnia magna</i> - Larvae	48 hours
	Acute LC50 3220000 µg/l Fresh water	Fish - Fathead minnow - <i>Pimephales promelas</i>	96 hours

**Conclusion/Summary** : Very toxic to aquatic life with long lasting effects.

### 12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
iso-butanol	-	74 % - Readily - 28 days	-	-

**Conclusion/Summary** : This product has not been tested for biodegradation.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
iso-butanol	-	-	Readily
Propylene glycol	-	-	Readily

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Trizinc bis(orthophosphate)	-	60960	High
Xylene	3.12	8.1 to 25.9	Low
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin	2.64 to 3.78	31	Low
Ethylbenzene	3.6	-	Low
iso-butanol	1	-	Low
1-Methoxy 2-propanol	<1	-	Low
Zinc oxide	-	28960	High
2-Methoxy-1-methylethyl acetate	1.2	-	Low
Toluene	2.73	90	Low
Ethanol	-0.35	-	Low
Propylene glycol	-1.07	-	Low
Propan-2-ol	0.05	-	Low
Butanone	0.3	-	Low

### 12.4 Mobility in soil

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

**Mobility** : Not available.

### 12.5 Results of PBT and vPvB assessment

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

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

## SECTION 13: Disposal considerations

### 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.





**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
<b>14.1 UN number</b>	UN1263	UN1263	UN1263	UN1263
<b>14.2 UN proper shipping name</b>	PAINT	PAINT	PAINT	PAINT
<b>14.3 Transport hazard class(es)</b>	3 	3 	3 	3 
<b>14.4 Packing group</b>	III	III	III	III
<b>14.5 Environmental hazards</b>	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.  
**Tunnel code** (D/E)

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

**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.

**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.

## SECTION 14: Transport information

**14.7 Transport in bulk according to IMO instruments** : Not relevant/applicable due to nature of the product.

## 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.

##### Ozone depleting substances

Not listed.

##### Prior Informed Consent (PIC)

Not listed.

##### Persistent Organic Pollutants

Not listed.

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

Product/ingredient name	%	Designation [Usage]
TEKNOZINC 50 SE	≥90	3
Toluene	≤0.1	48
Formaldehyde	<0.1	72

**Labelling** : Not applicable.

### Seveso Directive

This product is controlled under the Seveso Directive.

#### Danger criteria

Category
P5c E1

### National regulations

Product/ingredient name	List name	Name on list	Classification	Notes
Formaldehyde	UK Occupational Exposure Limits EH40 - WEL	formaldehyde; methanal	Carc.	-

### EU regulations

**Industrial emissions (integrated pollution prevention and control) - Air** : Listed

**Industrial emissions (integrated pollution prevention and control) - Water** : Listed

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### Montreal Protocol

## SECTION 15: Regulatory information

Not listed.

### [Stockholm Convention on Persistent Organic Pollutants](#)

Not listed.

### [Rotterdam Convention on Prior Informed Consent \(PIC\)](#)

Not listed.

### [UNECE Aarhus Protocol on POPs and Heavy Metals](#)

Not listed.

#### 15.2 Chemical safety assessment

: This product contains substances for which Chemical Safety Assessments are still required.

## SECTION 16: Other information

✔ Indicates information that has changed from previously issued version.

#### Abbreviations and acronyms

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

#### [Procedure used to derive the classification](#)

Classification	Justification
Flam. Liq. 2, H225 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	On basis of test data Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method

#### [Full text of abbreviated H statements](#)

H225	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.
H330	Fatal 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.
H361d	Suspected of damaging the unborn child.
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.

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TEKNOZINC 50 SE - All variants

**Label No** : 77661

## SECTION 16: Other information

H411	Toxic to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

### Full text of classifications

Acute Tox. 2	ACUTE TOXICITY - Category 2
Acute Tox. 3	ACUTE TOXICITY - Category 3
Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Acute 1	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
Aquatic Chronic 1	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1
Aquatic Chronic 2	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
Asp. Tox. 1	ASPIRATION HAZARD - Category 1
Carc. 1B	CARCINOGENICITY - Category 1B
Eye Dam. 1	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Flam. Liq. 2	FLAMMABLE LIQUIDS - Category 2
Flam. Liq. 3	FLAMMABLE LIQUIDS - Category 3
Muta. 2	GERM CELL MUTAGENICITY - Category 2
Repr. 2	REPRODUCTIVE TOXICITY - 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
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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TEKNOZINC 50 SE

All variants

### 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.

