



# Safety Data Sheet

## HEMPADUR ZINC 17369

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No. 453/2010 - United Kingdom (UK)

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

#### 1.1 Product identifier

Product name : HEMPADUR ZINC 17369  
Product identity : 1736919830  
Product type : epoxy zinc primer (base for multi-component product)

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

Field of application : metal industry, ships and shipyards.  
Ready-for-use mixture : 17360 = 17369 4 vol. / 97040 1 vol.  
Identified uses : Consumer applications, Industrial applications, Used by spraying.

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

Company details : Hempel UK Ltd  
Berwyn House, The Pavilions  
Llantarnam Park  
Cwmbran  
South Wales NP44 3FD  
Telephone: 01633 833600  
hempel@hempel.com

#### 1.4 Emergency telephone number

Emergency telephone number (with hours of operation)  
01633 833600 (08.00 - 17.00)  
See Section 4 of the safety data sheet (first aid measures).

Date of issue : 7 October 2014  
Date of previous issue : 1 August 2014.

### 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]**  
 FLAMMABLE LIQUIDS - Category 3  
SKIN CORROSION/IRRITATION - Category 2  
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2  
SKIN SENSITIZATION - Category 1  
ACUTE AQUATIC HAZARD - Category 1  
LONG-TERM AQUATIC HAZARD - Category 1

#### Classification according to Directive 1999/45/EC [DPD]

Classification : R10  
Xi; R36/38  
R43  
N; R50/53

See Section 16 for the full text of the R-phrases declared above.  
See Section 11 for more detailed information on health effects and symptoms.

#### 2.2 Label elements

Hazard pictograms :



Signal word : Warning  
Hazard statements : 226 - Flammable liquid and vapour.  
H319 - Causes serious eye irritation.  
H315 - Causes skin irritation.  
H317 - May cause an allergic skin reaction.  
H410 - Very toxic to aquatic life with long lasting effects.

Precautionary statements :

**SECTION 2: Hazards identification**

General :	⚠ medical advice is needed, have product container or label at hand. Keep out of reach of children.
Prevention :	⚠ Avoid breathing vapours, spray or mists. Wear protective gloves/protective clothing/eye protection/face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Response :	⚠ IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If skin irritation occurs: Get medical attention.
Storage :	Keep cool.
Disposal :	Dispose of contents and container in accordance with all local, regional, national and international regulations.
Hazardous ingredients :	<ul style="list-style-type: none"> <li>⚠ xylene</li> <li>bisphenol A-(epichlorhydrin) epoxy resin MW =&lt; 700</li> <li>butan-1-ol</li> <li>bisphenol F-(epichlorhydrin) epoxy resin MW =&lt; 700 (C12-C14) Alkylglycidylether</li> <li>middlemolecular epoxyresin</li> </ul>
Supplemental label elements :	⚠ Contains epoxy constituents. May produce an allergic reaction.

**Special packaging requirements**

Containers to be fitted with child-resistant fastenings :	Not applicable.
Tactile warning of danger :	Not applicable.

**2.3 Other hazards**

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

**SECTION 3: Composition/information on ingredients****3.2 Mixtures**

Product/ingredient name	Identifiers	%	Classification		Type
			67/548/EEC	Regulation (EC) No. 1272/2008 [CLP]	
zinc powder - zinc dust (stabilized)	EC: 231-175-3 CAS: 7440-66-6 Index: 030-001-01-9	>=50 - <75	N; R50/53	Aquatic Acute 1, H400 Aquatic Chronic 1, H410	- [1]
xylene	REACH #: 01-2119488216-32 EC: 215-535-7 CAS: 1330-20-7 Index: 601-022-00-9	>=1 - <5	R10 Xn; R20/21 Xi; R38	Flam. Liq. 3, H226 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315	C [1] [2]
bisphenol A-(epichlorhydrin) epoxy resin MW =< 700	REACH #: 01-2119456619-26 EC: 500-033-5 CAS: 25068-38-6 Index: 603-074-00-8	>=2.5 - <5	Xi; R36/38 R43 N; R51/53	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411	- [1]
zinc oxide	REACH #: 01-2119463881-32 EC: 215-222-5 CAS: 1314-13-2 Index: 030-013-00-7	>=2.5 - <25	N; R50/53	Aquatic Chronic 2, H411 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	- [1]
butan-1-ol	REACH #: 01-2119484630-38 EC: 200-751-6 CAS: 71-36-3 Index: 603-004-00-6	>=1 - <3	R10 Xn; R22 Xi; R41, R37/38 R67	Flam. Liq. 3, H226 Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 and H336 (Respiratory tract irritation and Narcotic effects)	- [1]
bisphenol F-(epichlorhydrin) epoxy resin MW =< 700	REACH #: 01-2119454392-40 CAS: 28064-14-4	>=1 - <2.5	Xi; R36/38 R43 N; R51/53	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411	- [1]
solvent naphtha (petroleum), light arom.	REACH #: 01-2119455851-35 EC: 265-199-0 CAS: *64742-95-6 Index: 649-356-00-4	>=1 - <2.5	Xn; R20, R65 Xi; R36/37/38 N; R51/53	Flam. Liq. 3, H226 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 (Respiratory tract irritation)	P [1] [2]



### SECTION 3: Composition/information on ingredients

			See Section 16 for the full text of the R-phrases declared above.	Asp. Tox. 1, H304 Aquatic Chronic 2, H411 See Section 16 for the full text of the H statements declared above.	
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There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

#### Type

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit, see section 8.
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
- [5] Substance of equivalent concern

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

General :	In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.  If breathing is irregular, drowsiness, loss of consciousness or cramps: Call 112 and give immediate treatment (first aid).
Eye contact :	Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Seek immediate medical attention.
Inhalation :	Remove to fresh air. Keep person warm and at rest. If unconscious, place in recovery position and seek medical advice.
Skin contact :	Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleanser. Do NOT use solvents or thinners.
Ingestion :	If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do not induce vomiting unless directed to do so by medical personnel. Lower the head so that vomit will not re-enter the mouth and throat.
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

##### 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 :	Irritating to mouth, throat and stomach.

##### 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

Extinguishing media : Recommended: Approved Class D extinguisher or smother with dry sand, dry clay or dry ground limestone.  
NOT TO BE USED: WATER. Risk of formation of very flammable and explosive vapours.

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

Hazards from the substance or mixture : Flammable liquid and vapour. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard. 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 oxides halogenated compounds metal oxide/oxides

### 5.3 Advice for firefighters

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. Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard. Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or watercourses. 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.

## SECTION 6: Accidental release measures

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

Do not use water. Violent reaction may occur. Exclude sources of ignition and be aware of explosion hazard. Ventilate the area. Refer to protective measures listed in sections 7 and 8. No action shall be taken involving any personal risk or without suitable training. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.

### 6.2 Environmental precautions

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

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

Stop leak if without risk. Move containers from spill area. 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). Use spark-proof tools and explosion-proof equipment. Contaminated absorbent material may pose the same hazard as the spilt product.

### 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

### 7.1 Precautions for safe handling

Vapors are heavier than air and may spread along floors. Vapors may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapors in air and avoid vapor concentrations higher than the occupational exposure limits. In addition, the product should be used only in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard. To dissipate static electricity during transfer, ground drum and connect to receiving container with bonding strap. No sparking tools should be used. Contains epoxy constituents. Avoid all possible skin contact with epoxy and amine containing products, they may cause allergic reactions. Open with care, danger of overpressure.  
Avoid inhalation of vapour, dust and spray mist. Avoid contact with skin and eyes. Eating, drinking and smoking should be prohibited in area where this material is handled, stored and processed. Appropriate personal protective equipment: see Section 8. Always keep in containers made from the same material as the original one.

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



## SECTION 7: Handling and storage

Store in accordance with local regulations for flammable liquids. Store in a cool, well-ventilated area away from incompatible materials and ignition sources. Keep out of the reach of children. Keep away from: Oxidizing agents, strong alkalis, strong acids as well as of amines, alcohols and water. No smoking. Prevent unauthorized access. Containers that are opened must be carefully resealed and kept upright to prevent leakage.

### 7.3 Specific end use(s)

See separate Product Data Sheet for recommendations or industrial sector specific solutions.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Product/ingredient name	Exposure limit values
xylene	<b>EH40/2005 WELs (United Kingdom (UK), 12/2011). Absorbed through skin.</b> STEL: 441 mg/m <sup>3</sup> 15 minutes. STEL: 100 ppm 15 minutes. TWA: 220 mg/m <sup>3</sup> 8 hours. TWA: 50 ppm 8 hours.
butan-1-ol	<b>EH40/2005 WELs (United Kingdom (UK), 12/2011). Absorbed through skin.</b> STEL: 154 mg/m <sup>3</sup> 15 minutes. STEL: 50 ppm 15 minutes.
solvent naphtha (petroleum), light arom.	<b>EU OEL (Europe).</b> TWA: 120 mg/m <sup>3</sup> 8 hours. Form: TWA: 25 ppm 8 hours. Form:

### Recommended monitoring procedures

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

### Derived effect levels

No DNELs/DMELs available.

### Predicted effect concentrations

No PNECs available

### 8.2 Exposure controls

#### Appropriate engineering controls

Arrange sufficient ventilation by local exhaust ventilation and good general ventilation to keep the airborne concentrations of vapors or dust lowest possible and below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

#### Individual protection measures

General :

Gloves must be worn for all work that may result in soiling. Apron/coveralls/protective clothing must be worn when soiling is so great that regular work clothes do not adequately protect skin against contact with the product. Safety eyewear should be used when there is a likelihood of exposure.



Hygiene measures :

Wash hands, forearms, and face thoroughly after handling compounds and before eating, smoking, using lavatory, and at the end of day.

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.



## SECTION 8: Exposure controls/personal protection

Hand protection :	<p>Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training. The quality of the chemical-resistant protective gloves must be chosen as a function of the specific workplace concentrations and quantity of hazardous substances.</p> <p>Since the actual work situation is unknown. Supplier of gloves should be contacted in order to find the appropriate type. Below listed glove(s) should be regarded as generic advice:</p> <p>Recommended: Silver Shield / 4H gloves, Viton® May be used: nitrile rubber, butyl rubber, polyvinyl alcohol (PVA) Not recommended: neoprene rubber, natural rubber (latex), polyvinyl chloride (PVC)</p>
Body protection :	<p>Personal protective equipment for the body should be selected based on the task being performed and the risks involved handling this product.</p> <p>Wear suitable protective clothing. Always wear protective clothing when spraying.</p>
Respiratory protection :	<p>If working areas have insufficient ventilation: When the product is applied by means that will not generate an aerosol such as, brush or roller wear half or totally covering mask equipped with gas filter of type A, when grinding use particle filter of type P. When the product is applied by spraying and for continuous or prolonged work always wear an air-fed respirator e.g. hood with supply of fresh or compressed air or a full face, powered air purifying filter. Be sure to use an approved/certified respirator or equivalent.</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

### 9.1 Information on basic physical and chemical properties

Physical state :	Liquid.
Odour :	Amine-like.
pH :	Testing not relevant or not possible due to nature of the product.
Melting point/freezing point :	419.85°C This is based on data for the following ingredient: Zinc
Boiling point/boiling range :	Testing not relevant or not possible due to nature of the product.
Flash point :	Closed cup: 24°C (75.2°F)
Evaporation rate :	Testing not relevant or not possible due to nature of the product.
Flammability :	Highly flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.
Lower and upper explosive (flammable) limits :	0.8 - 11.3 vol %
Vapour pressure :	Testing not relevant or not possible due to nature of the product.
Vapour density :	Testing not relevant or not possible due to nature of the product.
Relative density :	3.214 g/cm <sup>3</sup>
Solubility(ies) :	Partially soluble in the following materials: cold water and hot water.
Partition coefficient (LogKow) :	Testing not relevant or not possible due to nature of the product.
Auto-ignition temperature :	Lowest known value: 355°C (671°F) (butan-1-ol).
Decomposition temperature :	Testing not relevant or not possible due to nature of the product.
Viscosity :	Testing not relevant or not possible due to nature of the product.
Explosive properties :	Explosive in the presence of the following materials or conditions: open flames, sparks and static discharge and heat. Slightly explosive in the presence of the following materials or conditions: moisture.
Oxidising properties :	Testing not relevant or not possible due to nature of the product.

### 9.2 Other information

Solvent(s) % by weight :	Weighted average: 9 %
Water % by weight :	Weighted average: 0 %
VOC content :	299.9 g/l

**SECTION 9: Physical and chemical properties**

VOC content, Ready-for-use mixture : 10.6 g/l

TOC Content : Weighted average: 245 g/l

Solvent Gas : Weighted average: 0.075 m<sup>3</sup>/l

**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**

Highly reactive or incompatible with the following materials: oxidizing materials and acids.  
Reactive or incompatible with the following materials: reducing materials, organic materials, alkalis and moisture.

**10.6 Hazardous decomposition products**

When exposed to high temperatures (i.e. in case of fire) harmful decomposition products may be formed:  
Decomposition products may include the following materials: carbon oxides halogenated compounds metal oxide/oxides

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

Exposure to component solvent vapor concentrations may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Solvents may cause some of the above effects by absorption through the skin. Symptoms and signs include headaches, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin. If splashed in the eyes, the liquid may cause irritation and reversible damage. Accidental swallowing may cause stomach pain. Chemical lung inflammation may occur if the product is taken into the lungs via vomiting.

Epoxy and amine containing products can cause skin disorders such as allergic eczema. The allergy may arise after only a short exposure period.

**Acute toxicity**

Product/ingredient name	Result	Species	Dose	Exposure
Xylene	LC50 Inhalation Gas.	Rat	5000 ppm	4 hours
	LC50 Inhalation Vapour	Rat	6350 ppm	4 hours
bisphenol A-(epichlorhydrin) epoxy resin MW =< 700	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	4300 mg/kg	-
	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Dermal	Rat	>2000 mg/kg	-
zinc oxide	LD50 Oral	Rat	>2000 mg/kg	-
	LC50 Inhalation Vapour	Rat	>5.7 mg/l	4 hours
butan-1-ol	LD50 Oral	Rat	>15000 mg/kg	-
	LC50 Inhalation Vapour	Rat	24000 mg/m <sup>3</sup>	4 hours
	LD50 Dermal	Rabbit	3400 mg/kg	-
bisphenol F-(epichlorhydrin) epoxy resin MW =< 700	LD50 Oral	Rat	790 mg/kg	-
	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	>2000 mg/kg	-
solvent naphtha (petroleum), light arom.	LD50 Oral	Rat	>2000 mg/kg	-
	LC50 Inhalation Vapour	Rat	>5 mg/l	4 hours

**SECTION 11: Toxicological information**

	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	8400 mg/kg	-

**Acute toxicity estimates**

Route	ATE value
<input checked="" type="checkbox"/> Oral	53490 mg/kg
<input type="checkbox"/> Dermal	43153.3 mg/kg
<input type="checkbox"/> Inhalation (gases)	196151.2 ppm
<input type="checkbox"/> Inhalation (vapours)	1559.6 mg/l

**Irritation/Corrosion**

Product/ingredient name	Result	Species	Score	Exposure
<input checked="" type="checkbox"/> zinc powder - zinc dust (stabilized)	Skin - Mild irritant	Human	-	72 hours 300 Micrograms Intermittent
<input type="checkbox"/> xylene	Eyes - Severe irritant	Rabbit	-	24 hours 5 milligrams
<input type="checkbox"/> bisphenol A-(epichlorhydrin) epoxy resin MW =< 700	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams
<input type="checkbox"/> zinc oxide	Eyes - Moderate irritant	Rabbit	-	24 hours 20 milligrams
<input type="checkbox"/> butan-1-ol	Skin - Moderate irritant	Rabbit	-	24 hours 500 microliters
<input type="checkbox"/> solvent naphtha (petroleum), light arom.	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams
	Eyes - Severe irritant	Rabbit	-	24 hours 2 milligrams
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams
	Eyes - Mild irritant	Rabbit	-	24 hours 100 microliters

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

Product/ingredient name	Category	Route of exposure	Target organs
butan-1-ol	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
solvent naphtha (petroleum), light arom.	Category 3	Not applicable.	Respiratory tract irritation

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

Product/ingredient name	Category	Route of exposure	Target organs
No known data available in our database.			

**Aspiration hazard**

Product/ingredient name	Result
solvent naphtha (petroleum), light arom.	ASPIRATION HAZARD - Category 1

**Information on the likely routes of exposure**

Routes of entry anticipated: Oral, Dermal, Inhalation.

**Potential chronic health effects**Sensitisation :  Contains bisphenol A-(epichlorhydrin) epoxy resin MW =< 700, bisphenol F-(epichlorhydrin) epoxy resin MW =< 700, (C12-C14) Alkylglycidylether, middlemolecular epoxyresin. May produce an allergic reaction.

Other information : No additional known significant effects or critical hazards.

**SECTION 12: Ecological information****12.1 Toxicity** Do not allow to enter drains or watercourses. Very toxic to aquatic life with long lasting effects.



**SECTION 12: Ecological information**

Product/ingredient name	Result	Species	Exposure
zinc powder - zinc dust (stabilized)	Acute EC50 106 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours
	Acute EC50 10000 µg/l Fresh water	Aquatic plants - Lemna minor	4 days
	Acute IC50 65 µg/l Marine water	Algae - Nitzschia closterium - Exponential growth phase	4 days
	Acute LC50 65 µg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
	Acute LC50 68 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 2.72 µg/l Fresh water	Fish - Oncorhynchus mykiss - Egg	96 hours
	Chronic EC10 27.3 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours
	Chronic EC10 59.2 µg/l Fresh water	Daphnia - Daphnia magna	21 days
	Chronic NOEC 9 mg/l Fresh water	Aquatic plants - Ceratophyllum demersum	3 days
	Chronic NOEC 178 µg/l Marine water	Crustaceans - Palaemon elegans	21 days
bisphenol A-(epichlorhydrin) epoxy resin MW =< 700	Chronic NOEC 2.6 µg/l Fresh water	Fish - Cyprinus carpio	4 weeks
	Acute EC50 >11 mg/l	Algae	72 hours
zinc oxide	Acute EC50 1.4 to 1.7 mg/l	Daphnia - Daphnia magna	48 hours
	Acute LC50 3.1 mg/l	Fish - fathead minnow (Pimephales promelas)	96 hours
butan-1-ol	LC50 1.1 ppm Fresh water	Fish - Pseudokirchneriella subcapitata - Exponential growth phase	96 hours
	Acute EC50 0.042 mg/l Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours
	Acute LC50 98 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
bisphenol F-(epichlorhydrin) epoxy resin MW =< 700	Chronic NOEC 0.017 mg/l Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours
	Acute LC50 1.376 mg/l	Fish	96 hours
solvent naphtha (petroleum), light arom.	Acute EC50 3.5 mg/l	Daphnia - Daphnia magna	48 hours
	Acute LC50 5.7 mg/l	Fish - guldskele (Leuciscus idus)	96 hours
solvent naphtha (petroleum), light arom.	Acute EC50 19 mg/l	Algae - Pseudokirchneriella subcapitata (green algae)	96 hours
	Acute EC50 6.14 mg/l	Daphnia - Daphnia magna	48 hours
solvent naphtha (petroleum), light arom.	Acute LC50 9.22 mg/l	Fish - Oncorhynchus mykiss (rainbow trout)	96 hours

**12.2 Persistence and degradability**

Product/ingredient name	Test	Result	Dose	Inoculum
xylene	OECD 302B Inherent Biodegradability: Zahn-Wellens/EMPA Test	>60 % - Readily - 28 days	-	-
		12 % - Not readily - 28 days	-	-
butan-1-ol	OECD 301D Ready Biodegradability - Closed Bottle Test	92 % - 20 days	-	-
solvent naphtha (petroleum), light arom.	-	>70 % - Readily - 28 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
xylene	-	-	Readily
			Not readily
bisphenol A-(epichlorhydrin) epoxy resin MW =< 700	-	12%; 28 day(s)	Readily
			-
butan-1-ol	-	-	Readily
			-
bisphenol F-(epichlorhydrin) epoxy resin MW =< 700	-	10 to 16%; 28 day(s)	-
			Readily
solvent naphtha (petroleum), light arom.	-	-	Readily

**12.3 Bioaccumulative potential**

**SECTION 12: Ecological information**

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
xylene	3.12	8.1 to 25.9	low
bisphenol A-(epichlorhydrin) epoxy resin MW =< 700	2.64 to 3.78	31	low
zinc oxide	2.2	60960	high
butan-1-ol	1	-	low
solvent naphtha (petroleum), light arom.	-	10 to 2500	high

**12.4 Mobility in soil**Soil/water partition coefficient (K<sub>oc</sub>) : No known data available in our database.

Mobility : No known data available in our database.

**12.5 Results of PBT and vPvB assessment**

PBT : Not applicable.

vPvB : Not applicable.

**12.6 Other adverse effects**

No known significant effects or critical hazards.

**SECTION 13: Disposal considerations****13.1 Waste treatment methods**

The generation of waste should be avoided or minimised wherever possible. Residues of the product is listed as hazardous waste. Dispose of according to all state and local applicable regulations. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Spillage, remains, discarded clothes and similar should be discarded in a fireproof container.

European waste catalogue no. (EWC) is given below.

European waste catalogue (EWC) : 08 01 11\*

**Packaging**

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.

**SECTION 14: Transport information**

Transport may take place according to national regulation or ADR for transport by road, RID for transport by train, IMDG for transport by sea, IATA for transport by air.

	14.1 UN no.	14.2 Proper shipping name	14.3 Transport hazard class(es)	14.4 PG*	14.5 Env*	14.5 Additional information
<b>ADR/RID Class</b>	UN1263	PAINT	3 -	 	III Yes.	<input checked="" type="checkbox"/> The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.  <b>Special provisions</b> 640 (E)  <b>Tunnel code</b> (D/E)
<b>IMDG Class</b>	UN1263	PAINT. (Zinc)	3 -	 	III Yes.	<input checked="" type="checkbox"/> The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.  <b>Emergency schedules (EmS)</b> F-E, S-E

**SECTION 14: Transport information**

<b>IATA Class</b>	UN1263 PAINT	3 -		III	No. <input type="checkbox"/>	The environmentally hazardous substance mark may appear if required by other transportation regulations.
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PG\* : Packing group  
Env.\* : Environmental hazards

**14.6 Special precautions for user**

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

**14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable.

**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 - Substances of very high concern

**Annex XIV**

None of the components are listed.

**Substances of very high concern**

None of the components are listed.

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

Not applicable.

**Other EU regulations**

**Seveso category** This product is controlled under the Seveso III Directive.

<b>Seveso category</b>
P5c: Flammable liquids 2 and 3 not falling under P5a or P5b E1: Hazardous to the aquatic environment - Acute 1 or Chronic 1 C6: Flammable (R10) C9i: Very toxic for the environment

**15.2 Chemical Safety Assessment**

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

**SECTION 16: Other information**

Abbreviations and acronyms :	ATE = Acute Toxicity Estimate CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008] EUH statement = CLP-specific Hazard statement RRN = REACH Registration Number DNEL = Derived No Effect Level PNEC = Predicted No Effect Concentration
Full text of abbreviated R phrases :	R10- Flammable. R20- Harmful by inhalation. R22- Harmful if swallowed. R20/21- Harmful by inhalation and in contact with skin. R65- Harmful: may cause lung damage if swallowed. R41- Risk of serious damage to eyes. R38- Irritating to skin. R36/38- Irritating to eyes and skin. R37/38- Irritating to respiratory system and skin. R36/37/38- Irritating to eyes, respiratory system and skin. R43- May cause sensitisation by skin contact. R67- Vapours may cause drowsiness and dizziness. R50/53- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Full text of classifications [DSD/DPD] :	Xn - Harmful Xi - Irritant N - Dangerous for the environment

**SECTION 16: Other information**

Full text of abbreviated H statements :	<input checked="" type="checkbox"/> H226 H302 (oral) H304 H312 (dermal) H315 H317 H318 H319 H332 (inhalation) H335 (Respiratory tract irritation) H335 and H336 (Respiratory tract irritation and Narcotic effects) H400 H410 H411	Flammable liquid and vapour. Harmful if swallowed. May be fatal if swallowed and enters airways. Harmful in contact with skin. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage. Causes serious eye irritation. Harmful if inhaled. May cause respiratory irritation. (Respiratory tract irritation) May cause respiratory irritation. May cause drowsiness or dizziness. (Respiratory tract irritation and Narcotic effects) Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects. Toxic to aquatic life with long lasting effects.
Full text of classifications [CLP/GHS] :	<input checked="" type="checkbox"/> Acute Tox. 4, H302 Acute Tox. 4, H312 Acute Tox. 4, H332 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 Aquatic Chronic 2, H411 Asp. Tox. 1, H304 Eye Dam. 1, H318 Eye Irrit. 2, H319 Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 STOT SE 3, H335 (Respiratory tract irritation) STOT SE 3, H335 and H336 (Respiratory tract irritation and Narcotic effects)	ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 ACUTE AQUATIC HAZARD - Category 1 LONG-TERM AQUATIC HAZARD - Category 1 LONG-TERM AQUATIC HAZARD - Category 2 ASPIRATION HAZARD - Category 1 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2 FLAMMABLE LIQUIDS - Category 3 SKIN CORROSION/IRRITATION - Category 2 SKIN SENSITIZATION - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation and Narcotic effects) - Category 3

**Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

Classification	Justification
<input checked="" type="checkbox"/> FLAMMABLE LIQUIDS - Category 3 SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2 SKIN SENSITIZATION - Category 1 ACUTE AQUATIC HAZARD - Category 1 LONG-TERM AQUATIC HAZARD - Category 1	On basis of test data Calculation method Calculation method Calculation method Calculation method Calculation method

**Notice to reader**

Indicates information that has changed from previously issued version.

The information contained in this safety data sheet is based on the present state of knowledge and EU and national legislation. It provides guidance on health, safety and environmental aspects for handling the product in a safe way and should not be construed as any guarantee of the technical performance or suitability for particular applications.

It is always the duty of the user/employer to ascertain that the work is planned and carried out in accordance with the national regulations.