

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No. 2015/830 - Europe

### 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 : Industrial applications, Used by spraying.

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

Company details : HEMPEL A/S  
Lundtoftegårdsvej 91  
DK-2800 Kgs. Lyngby  
Denmark  
Tel.: + 45 45 93 38 00  
hempel@hempel.com  
Date of issue : 2 February 2018  
Date of previous issue : 15 June 2017.

#### 1.4 Emergency telephone number

Emergency telephone number (with hours of operation)  
  
+45 45 93 38 00 (08.00 - 17.00)  
See section 4 First aid measures.

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

Product definition : Mixture

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

Flam. Liq. 3, H226 FLAMMABLE LIQUIDS - Category 3  
Skin Irrit. 2, H315 SKIN CORROSION/IRRITATION - Category 2  
Eye Irrit. 2, H319 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2  
Skin Sens. 1, H317 SKIN SENSITIZATION - Category 1  
Aquatic Acute 1, H400 AQUATIC HAZARD (ACUTE) - Category 1  
Aquatic Chronic 1, H410 AQUATIC HAZARD (LONG-TERM) - Category 1

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

#### 2.2 Label elements

Hazard pictograms :



Signal word : Warning

Hazard statements : H226 - Flammable liquid and vapor.  
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 :

Prevention : Avoid breathing vapors, 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 : IF 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.

Hazardous ingredients : bisphenol A-(epichlorhydrin) epoxy resin MW =< 700  
formaldehyde, polymer with (chloromethyl)oxirane and phenol (C12-C14) Alkylglycidylether  
middle molecular epoxy resin MMW 700-1200

Supplemental label elements : Contains epoxy constituents. May produce an allergic reaction.

#### Special packaging requirements

### SECTION 2: Hazards identification

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	%	Regulation (EC) No. 1272/2008 [CLP]	Type
zinc powder - zinc dust (stabilized)	REACH #: 01-2119467174-37 EC: 231-175-3 CAS: 7440-66-6	≥50 - ≤75	Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=10)	[1]
zinc oxide	REACH #: 01-2119463881-32 EC: 215-222-5 CAS: 1314-13-2 Index: 030-013-00-7	≥3 - ≤5	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	≥3 - ≤5	Flam. Liq. 3, H226 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315	[1] [2] C
bisphenol A-(epichlorhydrin) epoxy resin MW =< 700	REACH #: 01-2119456619-26 EC: 500-033-5 CAS: 25068-38-6 Index: 603-074-00-8	≥3 - ≤5	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411	[1]
n-butanol	REACH #: 01-2119484630-38 EC: 200-751-6 CAS: 71-36-3 Index: 603-004-00-6	≥1 - <3	Flam. Liq. 3, H226 Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 STOT SE 3, H336	[1]
formaldehyde, polymer with (chloromethyl)oxirane and phenol	REACH #: 01-2119454392-40 EC: 500-006-8 CAS: 9003-36-5	≥1 - ≤3	Skin Irrit. 2, H315 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	≥1 - ≤3	Flam. Liq. 3, H226 STOT SE 3, H335 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411	[1] [2] P
(C12-C14) Alkylglycidylether	REACH #: 01-2119485289-22 EC: 271-846-8 CAS: 68609-97-2 Index: 603-103-00-4	<1	Skin Irrit. 2, H315 Skin Sens. 1, H317	[1]
middle molecular epoxy resin MMW 700-1200	EC: 500-033-5 CAS: 25068-38-6 Index: 603-074-00-8	<1	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411 See Section 16 for the full text of the H statements declared above.	[1]

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
- [6] Additional disclosure due to company policy

### 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 recognized 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 :	No known significant effects or critical hazards.

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

Hazards from the substance or mixture :	Flammable liquid and vapor. 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 oxides halogenated compounds metal oxide/oxides

#### 5.3 Advice for firefighters

### SECTION 5: Firefighting measures

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 spilled 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 materials for containment and cleaning up

Stop leak if without risk. Move containers from spill area. Approach 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 spilled 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

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

### SECTION 8: Exposure controls/personal protection

Product/ingredient name	Exposure limit values
xylene  solvent naphtha (petroleum), light arom.	<b>EU OEL (Europe, 12/2017). Absorbed through skin.</b> TWA: 50 ppm 8 hours. TWA: 221 mg/m <sup>3</sup> 8 hours. STEL: 100 ppm 15 minutes. STEL: 442 mg/m <sup>3</sup> 15 minutes. <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 workstation 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.

Hand protection :

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.

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:

Recommended: Silver Shield / Barrier / 4H gloves, Viton®  
 May be used: neoprene rubber, butyl rubber, polyvinyl alcohol (PVA), polyvinyl chloride (PVC), nitrile rubber  
 Short term exposure: natural rubber (latex)

Body protection :

Personal protective equipment for the body should be selected based on the task being performed and the risks involved handling this product.  
 Wear suitable protective clothing. Always wear protective clothing when spraying.

### SECTION 8: Exposure controls/personal protection

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Wear appropriate respirator when ventilation is inadequate. Be sure to use approved/certified respirator or equivalent. It is not possible to specify precise filter type, since the actual work situation is unknown. Supplier of respirators should be contacted in order to find the appropriate filter.

#### 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.

Color : Reddish grey

Odor : 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: 28°C (82.4°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 %

Vapor pressure : Testing not relevant or not possible due to nature of the product.

Vapor density : Testing not relevant or not possible due to nature of the product.

Specific gravity : 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) (n-butanol).

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.

Oxidizing 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

VOC content, Ready-for-use mixture : 310.5 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

**SECTION 10: Stability and reactivity**

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 pressurize, 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
zinc powder - zinc dust (stabilized)	LC50 Inhalation Dusts and mists	Rat	5.41 mg/l	4 hours
	LD50 Oral	Rat	>2000 mg/kg	-
zinc oxide	LC50 Inhalation Vapor	Rat	>5.7 mg/l	4 hours
	LD50 Dermal	Rat	>2000 mg/kg	-
xylene	LD50 Oral	Rat	>5000 mg/kg	-
	LC50 Inhalation Gas.	Rat	5000 ppm	4 hours
bisphenol A-(epichlorhydrin) epoxy resin MW =< 700	LC50 Inhalation Vapor	Rat	6350 ppm	4 hours
	LD50 Dermal	Rabbit	>4200 mg/kg	-
	LD50 Oral	Rat	3523 mg/kg	-
n-butanol	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	>2000 mg/kg	-
formaldehyde, polymer with (chloromethyl)oxirane and phenol	LC50 Inhalation Vapor	Rat	24000 mg/m <sup>3</sup>	4 hours
	LD50 Dermal	Rabbit	3400 mg/kg	-
solvent naphtha (petroleum), light arom.	LD50 Oral	Rat	790 mg/kg	-
	LD50 Dermal	Rabbit	>2000 mg/kg	-
(C12-C14) Alkylglycidylether	LD50 Oral	Rat	>2000 mg/kg	-
	LD50 Dermal	Rat	8400 mg/kg	-
middle molecular epoxy resin MMW 700-1200	LD50 Oral	Rat	>4500 mg/kg	-
	LD50 Dermal	Rat	>5000 mg/kg	-
	LD50 Dermal	Rat	>2000 mg/kg	-

**Acute toxicity estimates**

Route	ATE value
Oral	53372.4 mg/kg
Dermal	43015.4 mg/kg
Inhalation (gases)	195524.4 ppm

**Irritation/Corrosion**

**SECTION 11: Toxicological information**

Product/ingredient name	Result	Species	Score	Exposure
zinc powder - zinc dust (stabilized) zinc oxide	Skin - Mild irritant	Human	-	72 hours 300 Micrograms Intermittent
	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams
xylene	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams
	Eyes - Severe irritant	Rabbit	-	24 hours 5 milligrams
bisphenol A-(epichlorhydrin) epoxy resin MW =< 700	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams
	Eyes - Mild irritant	Rabbit	-	-
n-butanol	Skin - Mild irritant	Rabbit	-	-
	Eyes - Severe irritant	Rabbit	-	24 hours 2 milligrams
formaldehyde, polymer with (chloromethyl)oxirane and phenol solvent naphtha (petroleum), light arom.	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams
	Skin - Mild irritant	Rabbit	-	24 hours 500 microliters
(C12-C14) Alkylglycidylether	Eyes - Mild irritant	Rabbit	-	24 hours 100 microliters
	Skin - Moderate irritant	Rabbit	-	24 hours 500 microliters
	Eyes - Mild irritant	Rabbit	-	-

**Sensitizer**

Product/ingredient name	Route of exposure	Species	Result
bisphenol A-(epichlorhydrin) epoxy resin MW =< 700 (C12-C14) Alkylglycidylether middle molecular epoxy resin MMW 700-1200	skin	Guinea pig	Sensitizing
	skin	Guinea pig	Sensitizing
	skin	Guinea pig	Sensitizing

**Mutagenic effects**

No known significant effects or critical hazards.

**Carcinogenicity**

No known significant effects or critical hazards.

**Reproductive toxicity**

No known significant effects or critical hazards.

**Teratogenic effects**

No known significant effects or critical hazards.

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

Product/ingredient name	Category	Route of exposure	Target organs
n-butanol	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

**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
No known data available in our database.	

**Information on the likely routes of exposure**

Routes of entry anticipated: Oral, Dermal, Inhalation.

**Potential chronic health effects**

Sensitization : Contains bisphenol A-(epichlorhydrin) epoxy resin MW =< 700, formaldehyde, polymer with (chloromethyl)oxirane and phenol, (C12-C14) Alkylglycidylether, middle molecular epoxy resin MMW 700-1200. 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.

Product/ingredient name	Result	Species	Exposure
zinc powder - zinc dust (stabilized)	Acute EC50 0.3 mg/l Marine water Acute EC50 0.354 mg/l Fresh water Acute LC50 0.238 - 0.269 mg/l Fresh water Chronic EC10 27.3 µg/l Fresh water	Algae Daphnia Fish Algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours 48 hours 96 hours 72 hours
zinc oxide	Chronic EC10 59.2 µg/l Fresh water Chronic NOEC 9 mg/l Fresh water  Chronic NOEC 178 µg/l Marine water Chronic NOEC 2.6 µg/l Fresh water Acute EC50 0.17 mg/l	Daphnia - Daphnia magna Aquatic plants - Ceratophyllum demersum Crustaceans - Palaemon elegans Fish - Cyprinus carpio Algae - Pseudokirchneriella subcapitata - Exponential growth phase	21 days 3 days  21 days 4 weeks 72 hours
bisphenol A-(epichlorhydrin) epoxy resin MW =< 700	Acute LC50 24600 µg/l Fresh water Acute EC50 >11 mg/l	Daphnia - Pseudokirchneriella subcapitata - Exponential growth phase Daphnia - Daphnia magna - Neonate Algae	48 hours 72 hours
n-butanol	Acute EC50 1.4 - 1.7 mg/l Acute LC50 3.1 mg/l	Daphnia - Daphnia magna Fish - fathead minnow (Pimephales promelas)	48 hours 96 hours
formaldehyde, polymer with (chloromethyl)oxirane and phenol	Acute EC50 1328 mg/l Acute LC50 1.376 mg/l Acute EC50 2.54 mg/l	Daphnia Fish Fish	96 hours 96 hours 96 hours
solvent naphtha (petroleum), light arom.	Acute LC50 1.8 mg/l Acute LC50 2.55 mg/l Acute EC50 19 mg/l	Algae Daphnia Algae - Pseudokirchneriella subcapitata (green algae)	72 hours 48 hours 96 hours
(C12-C14) Alkylglycidylether	Acute EC50 6.14 mg/l Acute LC50 9.22 mg/l	Daphnia - Daphnia magna Fish - Oncorhynchus mykiss (rainbow trout)	48 hours 96 hours
middle molecular epoxy resin MMW 700-1200	Acute IC50 843.75 mg/l Acute LC50 5000 mg/l Acute EC50 >100 mg/l  Acute LC50 >100 mg/l	Algae Fish Daphnia Fish	72 hours 96 hours 48 hours 96 hours

**12.2 Persistence and degradability**

Product/ingredient name	Test	Result	Dose	Inoculum
xylene	-	>60 % - Readily - 28 days	-	-
bisphenol A-(epichlorhydrin) epoxy resin MW =< 700	OECD 302B Inherent Biodegradability: Zahn-Wellens/ EMPA Test	12 % - Not readily - 28 days	-	-
n-butanol	OECD 301D Ready Biodegradability - Closed Bottle Test	92 % - 20 days	-	-
formaldehyde, polymer with (chloromethyl)oxirane and phenol	OECD 301B Ready Biodegradability - CO <sub>2</sub> Evolution Test	16 % - Not readily - 28 days	-	-
solvent naphtha (petroleum), light arom.	-	>70 % - Readily - 28 days	-	-
(C12-C14) Alkylglycidylether	-	87 % - Readily - 28 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
xylene	-	-	Readily
bisphenol A-(epichlorhydrin) epoxy resin MW =< 700	-	-	Not readily
n-butanol	-	-	Readily
formaldehyde, polymer with (chloromethyl)oxirane and phenol	-	-	Not readily
solvent naphtha (petroleum), light arom.	-	-	Readily
(C12-C14) Alkylglycidylether	-	-	Readily

**12.3 Bioaccumulative potential**

### SECTION 12: Ecological information

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
zinc oxide	2.2	60960	high
xylene	3.12	8.1 - 25.9	low
bisphenol A-(epichlorhydrin) epoxy resin MW =< 700	2.64 - 3.78	31	low
n-butanol	1	3.16	low
formaldehyde, polymer with (chloromethyl)oxirane and phenol	2.7	150	low
solvent naphtha (petroleum), light arom.	-	10 - 2500	high
(C12-C14) Alkyglycidylether	3.77	160 - 263	low
middle molecular epoxy resin MMW 700-1200	2.64 - 3.78	31	low

#### 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 minimized 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 minimized 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* Additional information
<b>ADR/RID Class</b>	UN1263	PAINT	3  	III	Yes. The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg. <b>Tunnel code</b> (D/E)
<b>IMDG Class</b>	UN1263	PAINT. (Zinc)	3  	III	Yes. The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg. <b>Emergency schedules</b> F-E, S-E
<b>IATA Class</b>	UN1263	PAINT	3 	III	Yes. The environmentally hazardous substance mark may appear if required by other transportation regulations.

PG\* : Packing group

Env.\* : Environmental hazards

#### 14.6 Special precautions for user

### SECTION 14: Transport information

**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 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 authorization - 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.

Seveso category
P5c: Flammable liquids 2 and 3 not falling under P5a or P5b E1: Hazardous to the aquatic environment - Acute 1 or Chronic 1 6: Flammable (R10) 9i: 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 H statements :  
 H226 Flammable liquid and vapor.  
 H302 Harmful if swallowed.  
 H304 May be fatal if swallowed and enters airways.  
 H312 Harmful in contact with skin.  
 H315 Causes skin irritation.  
 H317 May cause an allergic skin reaction.  
 H318 Causes serious eye damage.  
 H319 Causes serious eye irritation.  
 H332 Harmful if inhaled.  
 H335 May cause respiratory irritation.  
 H336 May cause drowsiness or dizziness.  
 H400 Very toxic to aquatic life.  
 H410 Very toxic to aquatic life with long lasting effects.  
 H411 Toxic to aquatic life with long lasting effects.

Full text of classifications [CLP/GHS] :  
 Acute Tox. 4, H302 ACUTE TOXICITY (oral) - Category 4  
 Acute Tox. 4, H312 ACUTE TOXICITY (dermal) - Category 4  
 Acute Tox. 4, H332 ACUTE TOXICITY (inhalation) - Category 4  
 Aquatic Acute 1, H400 AQUATIC HAZARD (ACUTE) - Category 1  
 Aquatic Chronic 1, H410 AQUATIC HAZARD (LONG-TERM) - Category 1  
 Aquatic Chronic 2, H411 AQUATIC HAZARD (LONG-TERM) - Category 2  
 Asp. Tox. 1, H304 ASPIRATION HAZARD - Category 1  
 Eye Dam. 1, H318 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1  
 Eye Irrit. 2, H319 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2  
 Flam. Liq. 3, H226 FLAMMABLE LIQUIDS - Category 3  
 Skin Irrit. 2, H315 SKIN CORROSION/IRRITATION - Category 2  
 Skin Sens. 1, H317 SKIN SENSITIZATION - Category 1  
 STOT SE 3, H335 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3  
 STOT SE 3, H336 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) -

### SECTION 16: Other information

Category 3

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

Classification	Justification
FLAMMABLE LIQUIDS - Category 3	On basis of test data
SKIN CORROSION/IRRITATION - Category 2	Calculation method
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2	Calculation method
SKIN SENSITIZATION - Category 1	Calculation method
AQUATIC HAZARD (ACUTE) - Category 1	Calculation method
AQUATIC HAZARD (LONG-TERM) - Category 1	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.