

Safety Data Sheet according to GB/T 16483-2008 and GB/T 17519-2013 - China

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

1.1 Product identifier

Product name : Hempadur 15557 Base


Product identity : 1555711150

Product type : epoxy 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 : 15553 = 15557 3 vol. / 98021 1 vol. 15554 = 15557 3 vol. / 98024 1 vol.

Identified uses :  Industrial applications, Professional applications, Used by spraying.

1.3 Details of the supplier of the safety data sheet

Company details : **Hempel North Asia Holding Co. Ltd.**
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hempel@hempel.com

1.4 Emergency telephone number

+86 400-6267-911

Manufacturer : **HEMPEL (KUNSHAN) COATINGS LTD.**
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Date of issue : 29 October 2021

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SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Physical state : Liquid.


Color : Grey

Odor : Solvent-like

Emergency overview

Flammable liquid and vapor. Causes serious eye damage. Causes skin irritation. May cause an allergic skin reaction. Suspected of damaging fertility or the unborn child. Suspected of causing cancer. May cause damage to organs through prolonged or repeated exposure. Toxic to aquatic life with long lasting effects.

GHS Classification

 **FLAMMABLE LIQUIDS** - Category 3

SKIN CORROSION/IRRITATION - Category 2

SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1

SKIN SENSITIZATION - Category 1

CARCINOGENICITY - Category 2

TOXIC TO REPRODUCTION - Category 2

SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

AQUATIC HAZARD (ACUTE) - Category 2

AQUATIC HAZARD (LONG-TERM) - Category 2

SECTION 2: Hazards identification

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

2.2 Label elements

Hazard pictograms :



Signal word :

Danger

Hazard statements :

H226 - Flammable liquid and vapor.
H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H318 - Causes serious eye damage.
H351 - Suspected of causing cancer.
H361 - Suspected of damaging fertility or the unborn child.
H373 - May cause damage to organs through prolonged or repeated exposure.
H401 - Toxic to aquatic life.
H411 - Toxic to aquatic life with long lasting effects.

Precautionary statements :

Prevention :

Obtain special instructions before use. Wear protective gloves, protective clothing and eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating or lighting equipment. Use non-sparking tools. Take action to prevent static discharges. Avoid release to the environment. Do not breathe vapor, mist or spray. Wash thoroughly after handling.

Response :

Collect spillage. IF exposed or concerned: Get medical advice or attention. Take off contaminated clothing and wash it before reuse. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.

Storage :

Store in a well-ventilated place. Keep cool.

Disposal :

Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazardous ingredients :

middle molecular epoxy resin MMW 700-1200
xylene
Methylstyrenated phenol
butan-1-ol
trizinc bis(orthophosphate)

Physical and chemical hazards

Flammable liquid and vapor.

Health hazards

Causes serious eye damage. Causes skin irritation. May cause an allergic skin reaction. Suspected of damaging fertility or the unborn child. Suspected of causing cancer. May cause damage to organs through prolonged or repeated exposure.

Environmental hazards

Toxic to aquatic life with long lasting effects.

2.3 Other hazards

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

SECTION 3: Composition/information on ingredients

3.2 Mixtures

SECTION 3: Composition/information on ingredients

Product/ingredient name	Identifiers	%	GHS Classification
middle molecular epoxy resin MMW 700-1200	25068-38-6	≥10 - ≤25	SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A SKIN SENSITIZATION - Category 1
xylene	1330-20-7	≥5 - ≤10	AQUATIC HAZARD (LONG-TERM) - Category 2 FLAMMABLE LIQUIDS - Category 3 SKIN CORROSION/IRRITATION - Category 2
Methylstyrenated phenol	68512-30-1	≥5 - ≤10	AQUATIC HAZARD (ACUTE) - Category 2 SKIN CORROSION/IRRITATION - Category 2 SKIN SENSITIZATION - Category 1B
butan-1-ol	71-36-3	≥3 - ≤5	AQUATIC HAZARD (LONG-TERM) - Category 3 FLAMMABLE LIQUIDS - Category 3 SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
trizinc bis(orthophosphate)	7779-90-0	≥3 - ≤5	AQUATIC HAZARD (ACUTE) - Category 1 AQUATIC HAZARD (LONG-TERM) - Category 1
n-butyl acetate	123-86-4	≥1 - ≤3	FLAMMABLE LIQUIDS - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
Solvent naphtha (petroleum), light arom.	64742-95-6	≥1 - ≤3	FLAMMABLE LIQUIDS - Category 3 SKIN CORROSION/IRRITATION - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1
ethylbenzene	100-41-4	≥1 - ≤3	AQUATIC HAZARD (LONG-TERM) - Category 2 FLAMMABLE LIQUIDS - Category 2 CARCINOGENICITY - Category 2 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 ASPIRATION HAZARD - Category 1
1,2,4-trimethylbenzene	95-63-6	≥1 - ≤3	AQUATIC HAZARD (ACUTE) - Category 2 FLAMMABLE LIQUIDS - Category 3 SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 AQUATIC HAZARD (ACUTE) - Category 2 AQUATIC HAZARD (LONG-TERM) - Category 2
zinc oxide	1314-13-2	≤0.3	AQUATIC HAZARD (ACUTE) - Category 1 AQUATIC HAZARD (LONG-TERM) - Category 1
toluene	108-88-3	≤0.3	FLAMMABLE LIQUIDS - Category 2 SKIN CORROSION/IRRITATION - Category 2 TOXIC TO REPRODUCTION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 ASPIRATION HAZARD - Category 1 AQUATIC HAZARD (ACUTE) - Category 2 AQUATIC HAZARD (LONG-TERM) - Category 3

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.

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

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.
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 not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Give nothing by mouth. If unconscious, place in recovery position and get medical attention immediately.

SECTION 4: First aid measures

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. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

Eye contact :	Causes serious eye damage.
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 watering redness
Inhalation :	No specific data.
Skin contact :	Adverse symptoms may include the following: pain or irritation redness blistering may occur
Ingestion :	Adverse symptoms may include the following: stomach pains

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician :	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: alcohol resistant foam, CO ₂ , powders, water spray. Not to be used: waterjet.
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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 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 sulfur oxides phosphorus 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

Avoid all direct contact with the spilled material. Exclude sources of ignition and be aware of explosion hazard. Ventilate the area. Avoid breathing vapor or mist. 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.

Prevention of secondary hazards:

Keep unnecessary and unprotected personnel from entering. Shut off all ignition sources. No flares, smoking or flames in hazard area. Put on appropriate personal protective equipment.

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.

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. 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. 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	GBZ 2.1 (China, 8/2019). PC-TWA: 50 mg/m ³ 8 hours. PC-STEL: 100 mg/m ³ 15 minutes.
butan-1-ol	GBZ 2.1 (China, 8/2019). PC-TWA: 100 mg/m ³ 8 hours.
n-butyl acetate	GBZ 2.1 (China, 8/2019). PC-TWA: 200 mg/m ³ 8 hours. PC-STEL: 300 mg/m ³ 15 minutes.
Solvent naphtha (petroleum), light arom.	GBZ 2.1 (China). TWA Tentative: 25 ppm 8 hours.
ethylbenzene	GBZ 2.1 (China, 8/2019). PC-STEL: 150 mg/m ³ 15 minutes.

SECTION 8: Exposure controls/personal protection

1,2,4-trimethylbenzene	PC-TWA: 100 mg/m ³ 8 hours.
toluene	GBZ 2.1 (China). TWA Tentativ: 20 ppm 8 hours. GBZ 2.1 (China, 8/2019). Absorbed through skin. PC-TWA: 50 mg/m ³ 8 hours. PC-STEL: 100 mg/m ³ 15 minutes.

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.

8.2 Exposure controls

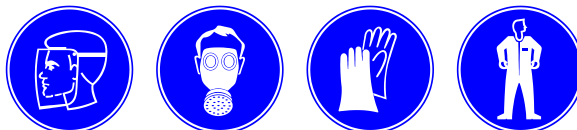
Appropriate engineering controls

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 and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

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, polyvinyl alcohol (PVA), Viton®

May be used: nitrile rubber

Short term exposure: neoprene rubber, butyl rubber, natural rubber (latex), polyvinyl chloride (PVC)

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.

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. 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. Be sure to use an approved/certified respirator or equivalent.

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 :	Grey
Odor :	Solvent-like
pH :	Testing not relevant or not possible due to nature of the product.
Melting point/freezing point :	Testing not relevant or not possible due to nature of the product.
Boiling point/boiling range :	Testing not relevant or not possible due to nature of the product.
Flash point :	Closed cup: 30°C (86°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. Flammable in the presence of the following materials or conditions: oxidizing materials. Slightly flammable in the presence of the following materials or conditions: reducing materials.
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 :	1.703 g/cm ³
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.
Oxidizing properties :	Testing not relevant or not possible due to nature of the product.

9.2 Other information

Solvent(s) % by weight :	Weighted average: 20 %
Water % by weight :	Weighted average: 0 %
VOC content :	340.7 g/l
VOC content - Hong Kong :	340.8 g/l
TOC Content :	Weighted average: 271 g/l
Solvent Gas :	Weighted average: 0.084 m ³ /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 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.

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

SECTION 10: Stability and reactivity

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 sulfur oxides phosphorus 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
Middle molecular epoxy resin MMW 700-1200 xylene	LD50 Dermal	Rat	>2000 mg/kg	-
	LC50 Inhalation Gas.	Rat	5000 ppm	4 hours
	LC50 Inhalation Vapor	Rat	6350 ppm	4 hours
	LD50 Dermal	Rabbit	>4200 mg/kg	-
titanium dioxide	LD50 Oral	Rat	3523 mg/kg	-
	LC50 Inhalation Dusts and mists	Rat	>6.8 mg/l	4 hours
	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
Methylstyrenated phenol	LC50 Inhalation Dusts and mists	Rat	>5 mg/l	4 hours
	LD50 Dermal	Rat	>2000 mg/kg	-
butan-1-ol	LC50 Inhalation Vapor	Rat	24000 mg/m ³	4 hours
	LD50 Dermal	Rabbit	3400 mg/kg	-
	LD50 Oral	Rat	790 mg/kg	-
solvent naphtha (petroleum), light arom.	LC50 Inhalation Vapor	Rat	6193 mg/m ³	4 hours
	LD50 Dermal	Rabbit	3160 mg/kg	-
	LD50 Oral	Rat	8400 mg/kg	-
trizinc bis(orthophosphate) n-butyl acetate	LD50 Oral	Rat	>5000 mg/kg	-
	LC50 Inhalation Vapor	Rat	>21 mg/l	4 hours
	LD50 Dermal	Rabbit	>14112 mg/kg	-
ethylbenzene	LD50 Oral	Rat	10768 mg/kg	-
	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-
zinc oxide	LC50 Inhalation Dusts and mists	Rat	>5.7 mg/l	4 hours
	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-

Acute toxicity estimates

Route	ATE value
Oral	20558.89 mg/kg
Dermal	14081.35 mg/kg
Inhalation (gases)	64006.13 ppm
Inhalation (vapors)	636.33 mg/l

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure
xylene	Eyes - Severe irritant	Rabbit	-	24 hours 5 milligrams
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams
	Skin - Irritant	Rabbit	-	-
titanium dioxide	Skin - Mild irritant	Human	-	72 hours 300 Micrograms Intermittent
Methylstyrenated phenol	Eyes - Mild irritant	Rabbit	-	-
	Skin - Irritant	Rabbit	-	-
butan-1-ol	Eyes - Severe irritant	Rabbit	-	24 hours 2 milligrams
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams
solvent naphtha (petroleum), light arom.	Eyes - Mild irritant	Rabbit	-	24 hours 100 microliters
n-butyl acetate	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams
	Eyes - Mild irritant	Rabbit	-	-
	Respiratory - Mild irritant	Rabbit	-	-
ethylbenzene	Skin - Mild irritant	Rabbit	-	24 hours 15 milligrams

SECTION 11: Toxicological information

zinc oxide	Respiratory - Mild irritant	Rabbit	-	-
	Eyes - Mild irritant	Rabbit	-	-
	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams

Sensitizer

Product/ingredient name	Route of exposure	Species	Result
middle molecular epoxy resin MMW 700-1200	skin	Guinea pig	Sensitizing

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
butan-1-ol	Category 3		Respiratory tract irritation
n-butyl acetate	Category 3		Narcotic effects
Solvent naphtha (petroleum), light arom.	Category 3		Narcotic effects
	Category 3		Respiratory tract irritation
1,2,4-trimethylbenzene	Category 3		Narcotic effects
toluene	Category 3		Respiratory tract irritation
	Category 3		Narcotic effects

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
ethylbenzene	Category 2	-	hearing organs
toluene	Category 2	-	-

Aspiration hazard

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

Information on the likely routes of exposure

Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential chronic health effects

Sensitization : Contains middle molecular epoxy resin MMW 700-1200, Methylstyrenated phenol. 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. Toxic to aquatic life with long lasting effects.

Product/ingredient name	Result	Species	Exposure
middle molecular epoxy resin MMW 700-1200	Acute EC50 >100 mg/l	Daphnia	48 hours
titanium dioxide	Acute LC50 >100 mg/l	Fish	96 hours
	Acute LC50 >100 mg/l	Daphnia	48 hours
	Acute LC50 >100 mg/l	Fish	96 hours
Methylstyrenated phenol	Acute EC50 15 mg/l	Algae	72 hours
	Acute EC50 14 - 51 mg/l	Daphnia	48 hours
	Acute EC50 25.8 mg/l	Fish	96 hours
butan-1-ol	Acute EC50 1328 mg/l	Daphnia	96 hours
	Acute LC50 1.376 mg/l	Fish	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
	Acute LC50 9.22 mg/l	Fish - Oncorhynchus mykiss (rainbow trout)	96 hours
trizinc bis(orthophosphate)	Acute EC50 0.8 mg/l	Algae	72 hours
	Acute EC50 2.44 mg/l	Daphnia	48 hours
n-butyl acetate	Acute EC50 648 mg/l	Algae	72 hours
	Acute EC50 44 mg/l	Daphnia	48 hours
ethylbenzene	Chronic NOEC <1000 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
zinc oxide	EC50 0.413 mg/l	Daphnia	48 hours
	LC50 0.1169 mg/l	Fish	96 hours
	Acute EC50 0.17 mg/l	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours

SECTION 12: Ecological information

	Acute EC50 1 mg/l	Daphnia - Pseudokirchneriella subcapitata - Exponential growth phase	48 hours
	Acute LC50 24600 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Chronic EC50 0.136 mg/l	Algae	72 hours

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
xylene	-	90 - 98 % - Readily - 28 days	-	-
butan-1-ol	-	>60 % - Readily - 28 days	-	-
solvent naphtha (petroleum), light arom.	-	92 % - 20 days	-	-
n-butyl acetate	-	>70 % - Readily - 28 days	-	-
ethylbenzene	-	90 % - Readily - 28 days	-	-
	-	80 % - Readily - 5 days	-	-
	-	>70 % - Readily - 28 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
xylene	-	-	Readily
Methylstyrenated phenol	-	-	Not readily
butan-1-ol	-	-	Readily
solvent naphtha (petroleum), light arom.	-	-	Readily
n-butyl acetate	-	-	Readily
ethylbenzene	-	-	Readily
zinc oxide	-	-	Not readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
middle molecular epoxy resin MMW 700-1200	2.64 - 3.78	31	low
xylene	3.12	8.1 - 25.9	low
Methylstyrenated phenol	3.627	-	low
butan-1-ol	1	3.16	low
solvent naphtha (petroleum), light arom.	-	10 - 2500	high
trizinc bis(orthophosphate)	-	60960	high
n-butyl acetate	2.3	3.1	low
ethylbenzene	3.6	-	low
zinc oxide	2.2	60960	high

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : No known data available in our database.

Mobility : No known data available in our database.

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.






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.

SECTION 14: Transport information

	14.1 UN no.	14.2 Proper shipping name	14.3 Transport hazard class(es)	14.4 PG*	14.5 Env.*	Additional information
UN Class	UN1263	PAINT	3  	III	Yes.	-
IMDG Class	UN1263	PAINT. (middle molecular epoxy resin MMW 700-1200)	3  	III	Yes.	The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg. Emergency schedules F-E, S-E
IATA Class	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

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

14.7 Transport in bulk according to IMO instruments

Not applicable.

SECTION 15: Regulatory information

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

List of Goods banned for Importing

None of the components are listed.

Inventory of Hazardous Chemicals

xylene
butan-1-ol
n-butyl acetate
ethylbenzene
1,2,4-trimethylbenzene
toluene

List of Goods banned for Exporting

None of the components are listed.

List of Toxic Chemicals Severely Restricted for Importing & Exporting by China

None of the components are listed.

Inventory of Highly Toxic Articles

None of the components are listed.

Catalogue of Hazardous Chemicals of Priority Management

toluene
phenol
benzene
methanol
1-chloro-2,3-epoxypropane


SECTION 16: Other information

Abbreviations and acronyms :

ATE = Acute Toxicity Estimate
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
DNEL = Derived No Effect Level
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
IMDG = International Maritime Dangerous Goods
IATA = International Air Transport Association
CAS = Chemical Abstracts Service
LC50 = Median lethal concentration
EC50 = Half maximal effective concentration
LD50 = Median lethal dose

SECTION 16: Other information

GHS Classification

Classification	Justification
 FLAMMABLE LIQUIDS - Category 3 SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 SKIN SENSITIZATION - Category 1 CARCINOGENICITY - Category 2 TOXIC TO REPRODUCTION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 AQUATIC HAZARD (ACUTE) - Category 2 AQUATIC HAZARD (LONG-TERM) - Category 2	On basis of test data Calculation method Calculation method Calculation method 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.