

HSNO 2017 - New Zealand

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

1.1 Product identifier

Product name : Hempadur Avantguard 550 Base
Product identity : 1734U19840
Product type : ☒ Activated zinc 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
Ready-for-use mixture : 1734G = 1734U 4 Lts/ 97043 1 Lts
Identified uses : Industrial applications, Used by spraying.

1.3 Details of the supplier of the safety data sheet

Company details : Hempel (Wattyl) New Zealand Limited
2-14 Patiki Road
Avondale, Auckland 1026
Tel.: 09 820 6700
Email: sales.nz@hempel.com

Date of Preparation : 24 April 2025
Date of previous issue : 15 October 2021.

1.4 Emergency telephone number

Emergency telephone number (with hours of operation)

Poisons Centre New Zealand: 0800 764 766 (24 hour)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

GHS Classification

☒ FLAMMABLE LIQUIDS - Category 3
SERIOUS EYE DAMAGE - 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 1
AQUATIC HAZARD (LONG-TERM) - Category 1

2.2 Label elements

Hazard pictograms :



Signal word : ☒ Danger

Hazard statements : ☒ H226 - Flammable liquid and vapor.
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.
H410 - Very toxic to aquatic life with long lasting effects.

Precautionary statements :

General : ☒ Do not apply directly into or onto water. Take all reasonable steps to ensure that the substance does not cause any significant adverse effects to the environment beyond the application area.

Prevention : ☒ Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing, eye protection, face protection, or hearing protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid release to the environment. Do not breathe vapor, mist or spray. Contaminated work clothing should not be allowed out of the workplace.

SECTION 2: Hazards identification

Response : ☒ Collect spillage. IF exposed or concerned: Get medical advice or attention. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. 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 locked up.

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

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	%
☒ zinc powder - zinc dust (stabilized)	CAS: 7440-66-6	≥30 - ≤60
bisphenol A-(epichlorhydrin) epoxy resin MW =< 700	CAS: 1675-54-3	≤10
middle molecular epoxy resin MMW 700-1200	CAS: 25068-38-6	≤5
zinc oxide	CAS: 1314-13-2	≤5
butan-1-ol	CAS: 71-36-3	≤5
xylene	CAS: 1330-20-7	≤4.8
Solvent naphtha (petroleum), light arom.	CAS: 64742-95-6	≤3
1,2,4-trimethylbenzene	CAS: 95-63-6	≤3
ethylbenzene	CAS: 100-41-4	<1

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

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.

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/advice.

Inhalation : ☒ Remove to fresh air and keep at rest in a position comfortable for breathing. Give nothing by mouth. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. If unconscious, place in recovery position and get medical attention immediately.

Skin contact : ☒ Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners. Remove contaminated clothing and shoes.

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

SECTION 4: First aid measures

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: 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

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. 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.

6.4 Reference to other sections

SECTION 6: Accidental release measures

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. 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

Occupational exposure limits

Product/ingredient name	Exposure limit values
Butan-1-ol	HSWA 2015 - HSW (GRWM) 2016. Workplace exposure standards (WES) (New Zealand, 11/2023) Absorbed through skin. WES-Ceiling: 50 ppm. WES-Ceiling: 150 mg/m ³ .
xylene	HSWA 2015 - HSW (GRWM) 2016. Workplace exposure standards (WES) (New Zealand, 11/2023) [xylene (o-, m-, p-isomers)] Ototoxicant. WES-TWA 8 hours: 50 ppm. WES-TWA 8 hours: 217 mg/m ³ .
1,2,4-trimethylbenzene	HSWA 2015 - HSW (GRWM) 2016. Workplace exposure standards (WES) (New Zealand, 11/2023) [Trimethyl benzene] WES-TWA 8 hours: 25 ppm. WES-TWA 8 hours: 123 mg/m ³ .
ethylbenzene	HSWA 2015 - HSW (GRWM) 2016. Workplace exposure standards (WES) (New Zealand, 11/2023) Absorbed through skin , Ototoxicant. WES-TWA 8 hours: 20 ppm. WES-TWA 8 hours: 88 mg/m ³ . WES-STEL 15 minutes: 176 mg/m ³ . WES-STEL 15 minutes: 40 ppm.

Biological exposure indices

Product/ingredient name	Exposure limit values
xylene	HSWA 2015 - HSW (GRWM) 2016. Biological exposure indices (BEI) (New Zealand, 11/2023) [xylene] BEI: 1.5 g/l, methylhippuric acid [in urine]. Sampling time: end of shift.
ethylbenzene	HSWA 2015 - HSW (GRWM) 2016. Biological exposure indices (BEI) (New Zealand, 11/2023) BEI: 0.25 g/g creatinine, sum of mandelic acid and phenylglyoxylic acids [in urine]. Sampling time: end of shift or end of exposure.

Recommended monitoring procedures

Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

8.2 Exposure controls

Appropriate engineering controls

SECTION 8: Exposure controls/personal protection

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 chemically 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 (>0.3 mm), butyl rubber (>0.5 mm)

Short term exposure: neoprene rubber (>0.1 mm), natural rubber (latex) (>0.4 mm), polyvinyl chloride (PVC), nitrile rubber (>0.1 mm), butyl rubber (>0.3 mm)

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.

Chemical-resistant apron.

Respiratory protection :

 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. 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. (EN140) 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 :

 Metal 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: 32°C (89.6°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.

Vapor pressure :

 Not applicable. [50°C (122°F)]

SECTION 9: Physical and chemical properties

Vapor density : Not available.

Specific gravity : 2.16 g/cm³

Partition coefficient (LogKow) : Testing not relevant or not possible due to nature of the product.

Auto-ignition temperature :

Ingredient name	°C	°F	Method
solvent naphtha (petroleum), light arom.	280 - 470	536 - 878	

Decomposition temperature : Testing not relevant or not possible due to nature of the product.

Viscosity : Aspiration hazard (H304) Not classified. Testing not relevant 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: 13 %

Water % by weight : Weighted average: 0 %

VOC content : 81 g/l

TOC Content : Weighted average: 217 g/l

Solvent Gas : Weighted average: 0.072 m³/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.

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.

Direct contact with the eyes can cause irreversible damage, including blindness.

Acute toxicity

SECTION 11: Toxicological information

Product/ingredient name	Result	Dose / Exposure	Effects
zinc powder - zinc dust (stabilized) bisphenol A-(epichlorhydrin) epoxy resin MW =< 700 middle molecular epoxy resin MMW 700-1200 zinc oxide butan-1-ol xylene Solvent naphtha (petroleum), light arom. 1,2,4-trimethylbenzene ethylbenzene	Rat - Oral - LD50 Rat - Inhalation - LC50 Dusts and mists Rat - Oral - LD50 Rabbit - Dermal - LD50 Rat - Dermal - LD50 Rat - Dermal - LD50 Rat - Oral - LD50 Rat - Dermal - LD50 Rat - Inhalation - LC50 Dusts and mists Rabbit - Dermal - LD50 Rat - Oral - LD50 Rat - Inhalation - LC50 Vapor Rabbit - Dermal - LD50 Rat - Oral - LD50 Rat - Inhalation - LC50 Vapor Rat - Inhalation - LC50 Gas. Rat - Oral - LD50 Rabbit - Dermal - LD50 Rat - Inhalation - LC50 Vapor Rat - Oral - LD50 Rat - Inhalation - LC50 Vapor Rat - Oral - LD50 Rabbit - Dermal - LD50	>2000 mg/kg 5.41 mg/l [4 hours] >2000 mg/kg >2000 mg/kg >2000 mg/kg >2000 mg/kg >5000 mg/kg >2000 mg/kg >5.7 mg/l [4 hours] 3400 mg/kg 790 mg/kg 24000 mg/m³ [4 hours] >4200 mg/kg 3523 mg/kg 6350 ppm [4 hours] 5000 ppm [4 hours] 3492 mg/kg 3160 mg/kg 6193 mg/m³ [4 hours] 5 g/kg 18000 mg/m³ [4 hours] 3500 mg/kg >5000 mg/kg	Toxic effects: Eye - Corneal damage Cardiac - Pulse rate Lung, Thorax, or Respiration - Dyspnea Toxic effects: Liver - Fatty liver degeneration Kidney, Ureter, and Bladder - Other changes Blood - Other changes Toxic effects: Liver - Other changes Kidney, Ureter, and Bladder - Other changes

Acute toxicity estimates

Route	ATE value
Oral Dermal Inhalation (vapors)	13959.84 mg/kg 51316.43 mg/kg 1789.41 mg/l

Irritation/Corrosion

Product/ingredient name	Result	Species	Exposure
zinc powder - zinc dust (stabilized) bisphenol A-(epichlorhydrin) epoxy resin MW =< 700 zinc oxide butan-1-ol xylene	Human - Skin - Mild irritant Rabbit - Eyes - Mild irritant Rabbit - Skin - Mild irritant Rabbit - Eyes - Mild irritant Rabbit - Skin - Mild irritant Rabbit - Eyes - Severe irritant Rabbit - Skin - Moderate irritant Rabbit - Eyes - Severe irritant Rabbit - Skin - Moderate irritant	Duration of treatment/ exposure: 72 hours Duration of treatment/ exposure: 24 hours Duration of treatment/ exposure: 24 hours Duration of treatment/ exposure: 24 hours Duration of treatment/ exposure: 24 hours Duration of treatment/ exposure: 24 hours Duration of treatment/ exposure: 24 hours Duration of treatment/ exposure: 24 hours Duration of treatment/ exposure: 24 hours	Amount/concentration applied: 300 Micrograms Intermittent Duration of treatment/exposure: 72 hours Amount/concentration applied: 500 milligrams Duration of treatment/exposure: 24 hours Amount/concentration applied: 500 milligrams Duration of treatment/exposure: 24 hours Amount/concentration applied: 2 milligrams Duration of treatment/exposure: 24 hours Amount/concentration applied: 20 milligrams Duration of treatment/exposure: 24 hours Amount/concentration applied: 5 milligrams Duration of treatment/exposure: 24 hours Amount/concentration applied: 500 milligrams

SECTION 11: Toxicological information

Solvent naphtha (petroleum), light arom.	Rabbit - Skin - Irritant Rabbit - Eyes - Mild irritant	Duration of treatment/ exposure: 24 hours	Duration of treatment/exposure: 24 hours
ethylbenzene	Rabbit - Respiratory - Mild irritant Rabbit - Skin - Moderate irritant Rabbit - Skin - Mild irritant	Duration of treatment/ exposure: 24 hours	Amount/concentration applied: 100 microliters Duration of treatment/exposure: 24 hours
	Rabbit - Respiratory - Mild irritant Rabbit - Eyes - Mild irritant		Amount/concentration applied: 15 milligrams Duration of treatment/exposure: 24 hours

Sensitizer

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

Mutagenic effects

No known data available in our database.

Carcinogenicity

No known data available in our database.

Reproductive toxicity

No known data available in our database.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Butan-1-ol	Category 3	1-Butanol	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Diisphenol A-(epichlorhydrin) epoxy resin MW =< 700	Category 2	-	-
middle molecular epoxy resin MMW 700-1200	Category 2	-	-
xylene	Category 2	-	-
1,2,4-trimethylbenzene	Category 2	-	-
ethylbenzene	Category 2	-	-

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

No known significant effects or critical hazards.

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)	Chronic - EC10 - Fresh water	Algae - Green algae - <i>Pseudokirchneriella subcapitata</i> - Exponential growth phase	27.3 µg/l [72 hours]
	Chronic - EC10 - Fresh water	Daphnia - Water flea - <i>Daphnia magna</i>	59.2 µg/l [21 days]
	Chronic - NOEC - Fresh water	Fish - common carp - <i>Cyprinus carpio</i>	2.6 µg/l [4 weeks]
	Acute - EC50 - Marine water	Algae	0.3 mg/l [72 hours]
	Acute - EC50 - Fresh water	Daphnia	0.354 mg/l [48 hours]
	Acute - LC50 - Fresh water	Fish	0.238 - 0.269 mg/l [96 hours]
	Acute - EC50	Algae	11 mg/l [72 hours]
bisphenol A-(epichlorhydrin) epoxy resin MW =< 700	Acute - LC50	Fish	2 mg/l [96 hours]
	Acute - EC50	Daphnia	1.8 mg/l [48 hours]
	Acute - LC50	Fish	>100 mg/l [96 hours]
middle molecular epoxy resin MMW 700-1200	Acute - EC50	Daphnia	>100 mg/l [48 hours]
	Acute - LC50 - Fresh water	Daphnia - Water flea - <i>Daphnia magna</i> - Neonate	24600 µg/l [48 hours]
zinc oxide	Acute - EC50	Algae - Green algae - <i>Pseudokirchneriella subcapitata</i> - Exponential growth phase	0.17 mg/l [72 hours]
	Acute - EC50	Daphnia - Green algae - <i>Pseudokirchneriella subcapitata</i> - Exponential growth phase	1 mg/l [48 hours]
	EC50	Daphnia	0.413 mg/l [48 hours]
	LC50	Fish	0.1169 mg/l [96 hours]
	Chronic - EC50	Algae	0.136 mg/l [72 hours]
butan-1-ol	Acute - LC50	Fish	1.376 mg/l [96 hours]
	Acute - EC50	Daphnia	1328 mg/l [96 hours]
Solvent naphtha (petroleum), light arom.	Acute - LC50	Fish - <i>Oncorhynchus mykiss</i> (rainbow trout)	9.22 mg/l [96 hours]
	Acute - EC50	Algae - <i>Pseudokirchneriella subcapitata</i> (green algae)	2.6 mg/l [96 hours]
	Acute - EC50	Daphnia	3.2 mg/l [48 hours]
1,2,4-trimethylbenzene	Acute - LC50 - Fresh water	Fish - Fathead minnow - <i>Pimephales promelas</i>	7720 µg/l [96 hours]
	Acute - LC50 - Marine water	Crustaceans - Scud - <i>Elasmopus pectinicus</i> - Adult	4910 µg/l [48 hours]
ethylbenzene	Chronic - NOEC - Fresh water	Algae - Green algae - <i>Pseudokirchneriella subcapitata</i>	<1000 µg/l [96 hours]

12.2 Persistence and degradability

Product/ingredient name	Test	Result
bisphenol A-(epichlorhydrin) epoxy resin MW =< 700	OECD Inherent Biodegradability: Zahn-Wellens/EMPA Test	12% [28 days] - Not readily
butan-1-ol	OECD Ready Biodegradability - Closed Bottle Test	92% [20 days]
xylene	OECD Ready Biodegradability - Manometric Respirometry Test	>60% [28 days] - Readily
	OECD Ready Biodegradability - Manometric Respirometry Test	90 - 98% [28 days] - Readily
Solvent naphtha (petroleum), light arom.	OECD Ready Biodegradability - Manometric Respirometry Test	>70% [28 days] - Readily
	OECD Ready Biodegradability - Manometric Respirometry Test	>60% [28 days] - Readily
	OECD Ready Biodegradability - Manometric Respirometry Test	78% [28 days] - Readily
ethylbenzene	OECD Ready Biodegradability - Manometric Respirometry Test	>70% [28 days] - Readily

Product/ingredient name	Aquatic half-life	Photolysis	
bisphenol A-(epichlorhydrin) epoxy resin MW =< 700			Not readily
zinc oxide			Not readily
butan-1-ol			Readily
xylene			Readily
Solvent naphtha (petroleum), light arom.			Readily
ethylbenzene			Readily

12.3 Bioaccumulative potential

SECTION 12: Ecological information

Product/ingredient name	LogP _{ow}	BCF	Potential
Disphenol A-(epichlorhydrin) epoxy resin MW =< 700	2.64 - 3.78	31	Low
middle molecular epoxy resin MMW 700-1200	2.64 - 3.78	31	Low
zinc oxide	2.2	60960	High
butan-1-ol	1	3.16	Low
xylene	3.12	8.1 - 25.9	Low
Solvent naphtha (petroleum), light arom.	-	10 - 2500	High
1,2,4-trimethylbenzene	3.63	243	Low
ethylbenzene	3.6	-	Low

12.4 Mobility in soil

Product/ingredient name	logK _{oc}	K _{oc}
Disphenol A-(epichlorhydrin) epoxy resin MW =< 700	3.26	1800
butan-1-ol	0.51	3.22078
xylene	1.59	39

Mobility : No known data available in our database.

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.

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 NZS for transport by road and 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
NZS Class	UN1263	PAINT	3  	III	Yes.	Hazchem code •3Y
IMDG Class	UN1263	PAINT. (Zinc)	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

This material is classified as hazardous according to criteria in the Hazardous Substances (Hazard Classification) Notice 2020.

This material is classified as DANGEROUS GOODS according to criteria in New Zealand Standard 5433:2012 Transport of Dangerous Goods on Land.

HSNO Classification

 FLAMMABLE LIQUIDS - Category 3
 SERIOUS EYE DAMAGE - 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 1
 AQUATIC HAZARD (LONG-TERM) - Category 1

Safety, health and environmental regulations specific for the product :

No known specific national and/or regional regulations applicable to this product (including its ingredients).

HSNO Group Standard : HSR002669

HSNO Group Standard assigned are based upon the GHS Classification.

SECTION 16: Other information

 Indicates information that has changed from previously issued version.

Classification	Justification
 FLAMMABLE LIQUIDS - Category 3 SERIOUS EYE DAMAGE - 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 1 AQUATIC HAZARD (LONG-TERM) - Category 1	On basis of test data Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.