# SAFETY DATA SHEET

1-187 1K Etch Primer

## Section 1. Identification

**Product name** : 1-187 1K Etch Primer

**Product type** : Liquid.

**Relevant identified uses of the substance or mixture and uses advised against**

| Identified uses |
| --- |
| Use in coatings - Priming materials and coatings |

**Uses advised against**
Not applicable.

**Supplier**

**Manufacturer** : Valspar b.v.
Zuiveringweg 89
8243 PE Lelystad
The Netherlands
tel: +31 (0)320 292200
fax: +31 (0)320 292201

**Emergency telephone number** : Call: +31 (0)320 292200 (during daytime)

**Supplier's details** : DBNZ Coatings Limited
176 Ossie James Drive
Hamilton Airport, 3282
NEW ZEALAND
T: +64 7847 0944
E: info@dbnz.co.nz

**Emergency telephone number (with hours of operation)** : New Zealand Poisons Information Centre: 0800 764766 (24 hrs)

CALL: +(64)-98010034 (Hours of operation - 24 hours)

**e-mail address of person responsible for this SDS** : msds@de-beer.com

## Section 2. Hazards identification

**HSNO Classification** : FLAMMABLE LIQUIDS - Category 2
ACUTE TOXICITY (oral) - Category 4
SKIN IRRITATION - Category 2
SERIOUS EYE DAMAGE - Category 1
SKIN SENSITISATION - Category 1
CARCINOGENICITY - Category 2
REPRODUCTIVE TOXICITY - Category 2
SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1

Percentage of the mixture consisting of ingredient(s) of unknown acute oral toxicity: 2.1%

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.

# Section 2. Hazards identification

## GHS label elements

**Signal word** : Danger

**Hazard statements** : Highly flammable liquid and vapour.
Harmful if swallowed.
Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye damage.
Suspected of causing cancer.
Suspected of damaging fertility or the unborn child.
May cause damage to organs through prolonged or repeated exposure.
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 vapour or spray. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.

**Response** : Collect spillage. IF exposed or concerned: Get medical advice or attention. IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell. Rinse mouth. 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.

**Symbol** :

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

# Section 3. Composition/information on ingredients

**Substance/mixture** : Mixture

| Ingredient name | % (w/w) | CAS number |
|---|---|---|
| ethanol | ≥10 - ≤30 | 64-17-5 |
| toluene | ≥10 - ≤30 | 108-88-3 |
| butan-1-ol | ≥10 - <20 | 71-36-3 |
| xylene | ≤10 | 1330-20-7 |
| ethyl acetate | ≤10 | 141-78-6 |
| trizinc bis(orthophosphate) | ≤5 | 7779-90-0 |
| reaction product: bisphenol-A-(epichlorhydrin); epoxy resin | ≤3 | 25068-38-6 |

# Section 3. Composition/information on ingredients

| | | |
|---|---|---|
| ethylbenzene | ≤3 | 100-41-4 |
| 2-butoxyethyl acetate | ≤3 | 112-07-2 |
| carbon black | <1 | 1333-86-4 |

**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

## Description of necessary first aid measures

**Inhalation** : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

**Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

**Skin contact** : Get medical attention immediately. Call a poison center or physician. Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

**Eye contact** : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.

## Most important symptoms/effects, acute and delayed

### Potential acute health effects

**Inhalation** : No known significant effects or critical hazards.

**Ingestion** : Harmful if swallowed.

**Skin contact** : Causes skin irritation. May cause an allergic skin reaction.

**Eye contact** : Causes serious eye damage.

### Over-exposure signs/symptoms

**Inhalation** : Adverse symptoms may include the following:
reduced foetal weight
increase in foetal deaths
skeletal malformations

# Section 4. First aid measures

**Ingestion** : Adverse symptoms may include the following:
stomach pains
reduced foetal weight
increase in foetal deaths
skeletal malformations

**Skin** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
reduced foetal weight
increase in foetal deaths
skeletal malformations

**Eyes** : Adverse symptoms may include the following:
pain
watering
redness

**Indication of immediate medical attention and special treatment needed, if necessary**

**Specific treatments** : No specific treatment.

**Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

**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.

**See toxicological information (Section 11)**

# Section 5. Firefighting measures

**Extinguishing media**

**Suitable** : Use dry chemical, $CO_2$, water spray (fog) or foam.

**Not suitable** : Do not use water jet.

**Specific hazards arising from the chemical** : Highly flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

**Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
phosphorus oxides
halogenated compounds
metal oxide/oxides

**Hazchem code** : 3YE

**Special precautions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

# Section 6. Accidental release measures

## Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

**For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

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

## Methods and material for containment and cleaning up

**Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

**Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

# Section 7. Handling and storage

## Precautions for safe handling

**Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

**Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

# Section 7. Handling and storage

**Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidising materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

# Section 8. Exposure controls/personal protection

## Control parameters

### Occupational exposure limits

| Ingredient name | Exposure limits |
|---|---|
| ethanol | **NZ HSWA 2015 - GRWM 2016 (New Zealand, 11/2020).**<br>WES-TWA: 1000 ppm 8 hours.<br>WES-TWA: 1880 mg/m³ 8 hours. |
| toluene | **NZ HSWA 2015 - GRWM 2016 (New Zealand, 11/2020). Absorbed through skin.**<br>WES-TWA: 188 mg/m³ 8 hours.<br>WES-TWA: 50 ppm 8 hours. |
| butan-1-ol | **NZ HSWA 2015 - GRWM 2016 (New Zealand, 11/2020). Absorbed through skin.**<br>WES-Ceiling: 150 mg/m³<br>WES-Ceiling: 50 ppm |
| xylene | **NZ HSWA 2015 - GRWM 2016 (New Zealand, 11/2020). [Xylene (o-, m-, p-isomers)] Notes: See Notice of Intended Changes.**<br>WES-TWA: 217 mg/m³, 0 times per shift, 8 hours.<br>WES-TWA: 50 ppm, 0 times per shift, 8 hours. |
| ethyl acetate | **NZ HSWA 2015 - GRWM 2016 (New Zealand, 11/2020).**<br>WES-TWA: 200 ppm 8 hours.<br>WES-TWA: 720 mg/m³ 8 hours. |
| ethylbenzene | **NZ HSWA 2015 - GRWM 2016 (New Zealand, 11/2020).**<br>WES-STEL: 543 mg/m³ 15 minutes.<br>WES-STEL: 125 ppm 15 minutes.<br>WES-TWA: 434 mg/m³ 8 hours.<br>WES-TWA: 100 ppm 8 hours. |
| 2-butoxyethyl acetate | **ACGIH TLV (United States, 1/2021). Notes: Refers to Appendix A -- Carcinogens. ACGIH 2003 Adoption**<br>TWA: 20 ppm 8 hours. |

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

**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 8. Exposure controls/personal protection

**Individual protection measures**

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

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

**Skin protection**

**Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

**Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

**Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

## Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

**Appearance**

**Physical state** : Liquid.

**Colour** : Not available.

**Odour** : Not available.

**Odour threshold** : Not available.

**pH** : Not applicable.

**Melting point/freezing point** : Not available.

**Boiling point, initial boiling point, and boiling range** : >77°C (>170.6°F)

**Flash point** : Closed cup: -4°C (24.8°F)

**Flammability** : Not available.

**Lower and upper explosion limit/flammability limit** : Not available.

**Vapour pressure** :

# Section 9. Physical and chemical properties and safety characteristics

| | Vapour Pressure at 20˚C | | | Vapour pressure at 50˚C | | |
|---|---|---|---|---|---|---|
| **Ingredient name** | **mm Hg** | **kPa** | **Method** | **mm Hg** | **kPa** | **Method** |
| ethylene oxide | 1314.11 | 175.2 | | | | |
| acetaldehyde | 900.07 | 120 | | | | |
| propylene oxide | 538 | 71.7 | OECD 104 | | | |
| methanol | 126.96 | 16.9 | | | | |
| ethyl acetate | 81.59 | 10.9 | | | | |
| benzene | 75.01 | 10 | | | | |
| ethanol | 42.95 | 5.7 | | | | |
| 1,4-dioxane | 30.75 | 4.1 | | | | |
| water | 23.8 | 3.2 | | | | |
| toluene | 23.17 | 3.1 | | | | |
| 4-methylpentan-2-one | 15.75 | 2.1 | | | | |
| ethylbenzene | 9.3 | 1.2 | | | | |
| butan-1-ol | <7.5 | <1 | DIN EN 13016-2 | | | |
| xylene | 6.7 | 0.89 | | | | |
| cumene | 3.72 | 0.5 | | | | |
| 2,6-dimethylheptan-4-one | 1.73 | 0.23 | | | | |
| Solvent naphtha (petroleum), medium aliph. | 1.5 to 4.5 | 0.2 to 0.6 | | | | |
| Formaldehyde | 1 | 0.13 | | | | |
| octamethylcyclotetrasiloxane | 0.99 | 0.13 | | | | |
| maleic anhydride | 0.25 | 0.033 | | | | |
| 2-butoxyethyl acetate | 0.23 | 0.031 | | | | |
| aluminium hydroxide | <0.08 | <0.011 | | | | |
| Phosphoric acid, solution | 0.03 | 0.004 | | | | |
| trizinc bis(orthophosphate) | 0 | 0 | | | | |
| reaction product: bisphenol-A-(epichlorhydrin); epoxy resin | 0 | 0 | EU A.4 | | | |
| zinc oxide | 0 | 0 | | | | |

**Relative vapour density** : Not available.

**Relative density** : 0.93

**Density** : 0.93 g/cm³

**Solubility(ies)** :

| Media | Result |
|---|---|
| cold water | Not soluble |
| hot water | Not soluble |

**Solubility in water** : Not available.

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

**Auto-ignition temperature** :

# Section 9. Physical and chemical properties and safety characteristics

| Ingredient name | °C | °F | Method |
|---|---|---|---|
| acetaldehyde | 175 | 347 | |
| 1,4-dioxane | 180 | 356 | |
| Solvent naphtha (petroleum), medium aliph. | >220 | >428 | ASTM E 659 |
| Ethene, homopolymer | 330 to 410 | 626 to 770 | |
| 2-butoxyethyl acetate | 340 | 644 | |
| 2,6-dimethylheptan-4-one | 345 | 653 | |
| butan-1-ol | 355 | 671 | EU A.15 |
| octamethylcyclotetrasiloxane | 384 to 387 | 723.2 to 728.6 | ASTM E 659 |
| cumene | 424 | 795.2 | |
| ethyl acetate | 426.67 | 800 | |
| ethylene oxide | 429 | 804.2 | EU A.15 |
| Formaldehyde | 430 | 806 | |
| xylene | 432 | 809.6 | |
| ethylbenzene | 432.22 | 810 | |
| 4-methylpentan-2-one | 448 | 838.4 | |
| propylene oxide | 449 | 840.2 | EU A.15 |
| ethanol | 455 | 851 | DIN 51794 |
| methanol | 455 | 851 | DIN 51794 |
| maleic anhydride | 477 | 890.6 | |
| toluene | 480 | 896 | |
| benzene | 498 | 928.4 | |

**Decomposition temperature** : Not available.

**Viscosity** : Not available.

**Particle characteristics**

**Median particle size** : Not applicable.

# Section 10. Stability and reactivity

**Reactivity** : No specific test data related to reactivity available for this product or its ingredients.

**Chemical stability** : The product is stable.

**Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

**Conditions to avoid** : Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

**Incompatible materials** : Reactive or incompatible with the following materials:
oxidising materials

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

# Section 11. Toxicological information

## Information on likely routes of exposure

**Inhalation** : No known significant effects or critical hazards.

**Ingestion** : Harmful if swallowed.

**Skin contact** : Causes skin irritation. May cause an allergic skin reaction.

**Eye contact** : Causes serious eye damage.

## Symptoms related to the physical, chemical and toxicological characteristics

**Inhalation** : Adverse symptoms may include the following:
reduced foetal weight
increase in foetal deaths
skeletal malformations

**Ingestion** : Adverse symptoms may include the following:
stomach pains
reduced foetal weight
increase in foetal deaths
skeletal malformations

**Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
reduced foetal weight
increase in foetal deaths
skeletal malformations

**Eye contact** : Adverse symptoms may include the following:
pain
watering
redness

## Delayed and immediate effects as well as chronic effects from short and long-term exposure

### Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|---|---|---|---|---|
| ethanol | LC50 Inhalation Vapour | Rat | 124700 mg/m³ | 4 hours |
| | LD50 Oral | Rat | 7 g/kg | - |
| toluene | LC50 Inhalation Vapour | Rat | 28.1 mg/l | 4 hours |
| | LD50 Dermal | Rabbit | >5000 mg/kg | - |
| | LD50 Oral | Rat | 636 mg/kg | - |
| butan-1-ol | LC50 Inhalation Vapour | Rat | 24000 mg/m³ | 4 hours |
| | LD50 Dermal | Rabbit | 3400 mg/kg | - |
| | LD50 Oral | Rat | 790 mg/kg | - |
| xylene | LC50 Inhalation Gas. | Rat | 5000 ppm | 4 hours |
| | LC50 Inhalation Vapour | Rat - Male | 29000 mg/l | 4 hours |
| | LD50 Dermal | Rabbit | 12126 mg/kg | - |
| | LD50 Oral | Rat | 4300 mg/kg | - |
| ethyl acetate | LC50 Inhalation Vapour | Rat | 1600 mg/l | 4 hours |
| | LD50 Dermal | Rabbit | >20000 mg/kg | - |
| | LD50 Oral | Rat | 5620 mg/kg | - |
| trizinc bis(orthophosphate) | LC50 Inhalation Dusts and mists | Rat | >5.7 mg/l | 4 hours |
| | LD50 Oral | Rat | >5000 mg/kg | - |
| ethylbenzene | LC50 Inhalation Vapour | Rat | 6350 ppm | 4 hours |
| | LD50 Dermal | Rabbit | 12126 mg/kg | - |
| | LD50 Oral | Rat | 3500 mg/kg | - |
| 2-butoxyethyl acetate | LD50 Dermal | Rabbit | 1500 mg/kg | - |
| | LD50 Oral | Rat | 1880 mg/kg | - |
| carbon black | LD50 Oral | Rat | >8000 mg/kg | - |

### Irritation/Corrosion

# Section 11. Toxicological information

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|---|---|---|---|---|---|
| ethanol | Eyes - Mild irritant | Rabbit | - | 24 hours 500 mg | - |
| | Eyes - Moderate irritant | Rabbit | - | 0.066666667 minutes 100 mg | - |
| | Eyes - Moderate irritant | Rabbit | - | 100 uL | - |
| | Eyes - Severe irritant | Rabbit | - | 500 mg | - |
| | Skin - Mild irritant | Rabbit | - | 400 mg | - |
| | Skin - Moderate irritant | Rabbit | - | 24 hours 20 mg | - |
| toluene | Eyes - Mild irritant | Rabbit | - | 0.5 minutes 100 mg | - |
| | Eyes - Mild irritant | Rabbit | - | 870 ug | - |
| | Eyes - Severe irritant | Rabbit | - | 24 hours 2 mg | - |
| | Skin - Mild irritant | Pig | - | 24 hours 250 uL | - |
| | Skin - Mild irritant | Rabbit | - | 435 mg | - |
| | Skin - Moderate irritant | Rabbit | - | 24 hours 20 mg | - |
| | Skin - Moderate irritant | Rabbit | - | 500 mg | - |
| butan-1-ol | Eyes - Severe irritant | Rabbit | - | 0.005 Ml | - |
| | Eyes - Severe irritant | Rabbit | - | 24 hours 2 mg | - |
| | Skin - Moderate irritant | Rabbit | - | 24 hours 20 mg | - |
| xylene | Eyes - Mild irritant | Rabbit | - | 87 mg | - |
| | Eyes - Severe irritant | Rabbit | - | 24 hours 5 mg | - |
| | Skin - Mild irritant | Rat | - | 8 hours 60 uL | - |
| | Skin - Moderate irritant | Rabbit | - | 100 % | - |
| | Skin - Moderate irritant | Rabbit | - | 24 hours 500 mg | - |
| reaction product: bisphenol-A-(epichlorhydrin); epoxy resin | Eyes - Mild irritant | Rabbit | - | 100 mg | - |
| | Skin - Moderate irritant | Rabbit | - | 24 hours 500 uL | - |
| | Skin - Severe irritant | Rabbit | - | 24 hours 2 mg | - |
| ethylbenzene | Eyes - Severe irritant | Rabbit | - | 500 mg | - |
| | Skin - Mild irritant | Rabbit | - | 24 hours 15 mg | - |
| 2-butoxyethyl acetate | Eyes - Mild irritant | Rabbit | - | 24 hours 500 mg | - |
| | Skin - Mild irritant | Rabbit | - | 500 mg | - |

## Sensitisation

Not available.

## Potential chronic health effects

**General** : May cause damage to organs through prolonged or repeated exposure. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

**Inhalation** : No known significant effects or critical hazards.

**Ingestion** : No known significant effects or critical hazards.

**Skin contact** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

**Eye contact** : No known significant effects or critical hazards.

# Section 11. Toxicological information

**Carcinogenicity** : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

**Mutagenicity** : No known significant effects or critical hazards.

**Teratogenicity** : Suspected of damaging the unborn child.

**Developmental effects** : No known significant effects or critical hazards.

**Fertility effects** : Suspected of damaging fertility.

## Chronic toxicity

Not available.

## Carcinogenicity

Not available.

## Mutagenicity

Not available.

## Teratogenicity

Not available.

## Reproductive toxicity

Not available.

## Specific target organ toxicity (single exposure)

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

## Specific target organ toxicity (repeated exposure)

| Product/ingredient name | Category | Route of exposure | Target organs |
|---|---|---|---|
| toluene | Category 2 | - | - |
| xylene | Category 2 | - | - |
| ethyl acetate | Category 2 | - | - |
| reaction product: bisphenol-A-(epichlorhydrin); epoxy resin | Category 2 | - | - |
| ethylbenzene | Category 2 | - | - |
| 2-butoxyethyl acetate | Category 2 | - | - |

## Aspiration hazard

Not available.

## Numerical measures of toxicity

### Acute toxicity estimates

| Product/ingredient name | Oral (mg/kg) | Dermal (mg/kg) | Inhalation (gases) (ppm) | Inhalation (vapours) (mg/l) | Inhalation (dusts and mists) (mg/l) |
|---|---|---|---|---|---|
| 1-187 1K Etch Primer | 1574.8 | 7719.6 | N/A | 53.4 | N/A |
| ethanol | 7000 | N/A | N/A | 124.7 | N/A |
| toluene | 636 | N/A | N/A | 11 | N/A |
| butan-1-ol | 790 | 3400 | N/A | 24 | N/A |
| xylene | 500 | 1100 | N/A | 29000 | N/A |
| ethyl acetate | 5620 | N/A | N/A | 1600 | N/A |
| ethylbenzene | 3500 | 12126 | N/A | 11 | N/A |
| 2-butoxyethyl acetate | 1880 | 1500 | N/A | 11 | N/A |

# Section 12. Ecological information

**Ecotoxicity** : This material is very toxic to aquatic life with long lasting effects.

**Aquatic and terrestrial toxicity**

| Product/ingredient name | Result | Species | Exposure |
|---|---|---|---|
| ethanol | Acute EC50 17.921 mg/l Marine water | Algae - Ulva pertusa | 96 hours |
| | Acute EC50 275 mg/l | Aquatic plants - Chlorella vulgaris | 72 hours |
| | Acute EC50 2000 µg/l Fresh water | Daphnia - Daphnia magna | 48 hours |
| | Acute LC50 25500 µg/l Marine water | Crustaceans - Artemia franciscana - Larvae | 48 hours |
| | Acute LC50 42000 µg/l Fresh water | Fish - Oncorhynchus mykiss | 4 days |
| | Chronic EC10 11.5 mg/l | Aquatic plants - Chlorella vulgaris | 72 hours |
| | Chronic NOEC 4.995 mg/l Marine water | Algae - Ulva pertusa | 96 hours |
| | Chronic NOEC 100 ul/L Fresh water | Daphnia - Daphnia magna - Neonate | 21 days |
| | Chronic NOEC 0.375 ul/L Fresh water | Fish - Gambusia holbrooki - Larvae | 12 weeks |
| toluene | Acute EC50 12.5 mg/l | Algae | 72 hours |
| | Acute EC50 >433 ppm Marine water | Algae - Skeletonema costatum | 96 hours |
| | Acute EC50 11600 µg/l Fresh water | Crustaceans - Gammarus pseudolimnaeus - Adult | 48 hours |
| | Acute EC50 3.8 mg/l | Daphnia - Daphnia magna | 48 hours |
| | Acute LC50 5.5 mg/l | Fish - Oncorhynchus kisutch | 96 hours |
| | Chronic NOEC 1000 µg/l Fresh water | Daphnia - Daphnia magna | 21 days |
| butan-1-ol | Acute EC50 225 mg/l | Algae - Desmodesmus subspicatus | 96 hours |
| | Acute EC50 1328 mg/l | Daphnia - Daphnia magna | 48 hours |
| | Acute LC50 1376 mg/l | Fish - Pimephales promelas | 96 hours |
| | Chronic NOEC 4.1 mg/l | Daphnia - Daphnia magna | 21 days |
| xylene | Acute EC50 1 to 10 mg/l | Algae | 72 hours |
| | Acute EC50 1 to 10 mg/l | Daphnia - Daphnia magna | 48 hours |
| | Acute LC50 8500 µg/l Marine water | Crustaceans - Palaemonetes pugio | 48 hours |
| | Acute LC50 13400 µg/l Fresh water | Fish - Pimephales promelas | 96 hours |
| ethyl acetate | Acute EC50 2500000 µg/l Fresh water | Algae - Selenastrum sp. | 96 hours |
| | Acute LC50 750000 µg/l Fresh water | Crustaceans - Gammarus pulex | 48 hours |
| | Acute LC50 154000 µg/l Fresh water | Daphnia - Daphnia cucullata | 48 hours |
| | Acute LC50 212500 µg/l Fresh water | Fish - Heteropneustes fossilis | 96 hours |
| | Acute NOEC >100 mg/l | Algae - Desmodesmus subspicatus | 72 hours |
| | Acute NOEC 2.4 mg/l | Daphnia - Daphnia magna | 21 days |
| | Chronic NOEC 75.6 mg/l Fresh water | Fish - Pimephales promelas - Embryo | 32 days |
| trizinc bis(orthophosphate) | Acute EC50 63.1 mg/l | Daphnia - Daphnia magna | 48 hours |
| | Acute LC50 90 µg/l Fresh water | Fish - Oncorhynchus mykiss | 96 hours |
| ethylbenzene | Acute EC50 4900 µg/l Marine water | Algae - Skeletonema costatum | 72 hours |
| | Acute EC50 7700 µg/l Marine water | Algae - Skeletonema costatum | 96 hours |
| | Acute EC50 6.53 mg/l Marine water | Crustaceans - Artemia sp. - Nauplii | 48 hours |
| | Acute EC50 2.93 mg/l Fresh water | Daphnia - Daphnia magna - Neonate | 48 hours |
| | Acute LC50 4200 µg/l Fresh water | Fish - Oncorhynchus mykiss | 96 hours |
| 2-butoxyethyl acetate | Acute EC50 1570 mg/l | Algae - Pseudokirchneriella subcapitata | 72 hours |
| | Acute EC50 37 mg/l | Daphnia - Daphnia magna | 48 hours |
| | Acute LC50 22 mg/l | Fish - Pimephales promelas | 96 hours |
| carbon black | Acute EC50 >10000 mg/l | Algae - Scenedesmus subspicatus | 72 hours |
| | Acute EC50 37.563 mg/l Fresh water | Daphnia - Daphnia magna - Neonate | 48 hours |
| | Acute LC50 >1000 mg/l | Fish - Brachydanio rerio | 96 hours |

# Section 12. Ecological information

| | | | |
|---|---|---|---|
| | Acute NOEC >10000 mg/l | Algae - Scenedesmus subspicatus | 72 hours |

## Persistence/degradability

| Product/ingredient name | Test | Result | Dose | Inoculum |
|---|---|---|---|---|
| ethanol | - | 84 % - 20 days | - | - |
| butan-1-ol | OECD 301E Ready Biodegradability - Modified OECD Screening Test | >70 % - 19 days | - | - |

| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability |
|---|---|---|---|
| ethanol | - | - | Readily |
| toluene | - | - | Readily |
| butan-1-ol | - | - | Readily |
| 2-butoxyethyl acetate | - | 90.4%; 28 day(s) | - |

## Bioaccumulative potential

| Product/ingredient name | $LogP_{ow}$ | BCF | Potential |
|---|---|---|---|
| ethanol | -0.35 | - | low |
| toluene | 2.73 | 90 | low |
| butan-1-ol | 1 | - | low |
| xylene | 3.12 | 8.1 to 25.9 | low |
| ethyl acetate | 0.68 | 30 | low |
| trizinc bis(orthophosphate) | - | 60960 | high |
| reaction product: bisphenol-A-(epichlorhydrin); epoxy resin | 2.64 to 3.78 | 31 | low |
| ethylbenzene | 3.6 | - | low |
| 2-butoxyethyl acetate | 1.51 | - | low |

## Mobility in soil

**Soil/water partition coefficient ($K_{OC}$)** : Not available.

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

# Section 13. Disposal considerations

**Disposal methods** : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

# Section 14. Transport information

| | New Zealand | IMDG | IATA |
|---|---|---|---|
| **UN number** | UN1263 | UN1263 | UN1263 |
| **UN proper shipping name** | PAINT | PAINT | Paint |
| **Transport hazard class(es)** | 3  | 3  | 3  |
| **Packing group** | II | II | II |
| **Environmental hazards** | Yes. | Yes. | Yes. The environmentally hazardous substance mark is not required. |

**Additional information**

**New Zealand** : The marine pollutant mark is not required when transported by road or rail.
**Hazchem code** 3YE
**Special provisions** 163

**IMDG** : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.
**Emergency schedules** F-E, _S-E_
**Special provisions** 163, 367

**IATA** : The environmentally hazardous substance mark may appear if required by other transportation regulations.
**Quantity limitation** Passenger and Cargo Aircraft: 5 L. Packaging instructions: 353. Cargo Aircraft Only: 60 L. Packaging instructions: 364. Limited Quantities - Passenger Aircraft: 1 L. Packaging instructions: Y341.
**Special provisions** A3, A72, A192

**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.

**Transport in bulk according to IMO instruments** : Not available.

# Section 15. Regulatory information

**HSNO Approval Number** : HSR002669

**HSNO Group Standard** : Surface Coatings and Colourants

**HSNO Classification** : FLAMMABLE LIQUIDS - Category 2
ACUTE TOXICITY (oral) - Category 4
SKIN IRRITATION - Category 2
SERIOUS EYE DAMAGE - Category 1
SKIN SENSITISATION - Category 1
CARCINOGENICITY - Category 2
REPRODUCTIVE TOXICITY - Category 2
SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1

**International regulations**

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

Not listed.

**Montreal Protocol**

Not listed.

# Section 15. Regulatory information

**Stockholm Convention on Persistent Organic Pollutants**

Not listed.

**Rotterdam Convention on Prior Informed Consent (PIC)**

Not listed.

**UNECE Aarhus Protocol on POPs and Heavy Metals**

Not listed.

**Inventory list**

**Australia** : All components are listed or exempted.

**Canada** : Not determined.

**China** : Not determined.

**Eurasian Economic Union** : **Russian Federation inventory**: Not determined.

**Japan** : **Japan inventory (CSCL)**: Not determined.
**Japan inventory (ISHL)**: Not determined.

**New Zealand** : All components are listed or exempted.

**Philippines** : Not determined.

**Republic of Korea** : Not determined.

**Taiwan** : Not determined.

**Thailand** : Not determined.

**Turkey** : Not determined.

**United States** : Not determined.

**Viet Nam** : Not determined.

# Section 16. Other information

**History**

**Date of printing** : 12/16/2022

**Date of issue/Date of revision** : 12/16/2022

**Date of previous issue** : 12/16/2022

**Version** : 1

**Key to abbreviations** : ADG = Australian Dangerous Goods
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
SGG = Segregation Group
UN = United Nations

**References** : Not available.

**Indicates information that has changed from previously issued version.**

**Notice to reader**

## Section 16. Other information

**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.**