

# SAFETY DATA SHEET

Black Repair Cement



## Section 1. Identification

|   |  |
|---|--|
| <b>Product name</b>   | : Black Repair Cement  |
| <b>Other means of identification</b>                        | : Not available.   |
| <b>Product code</b>   | : 16-325; 16-326; 16-327   |
| <b>Product use</b>  | : Adhesive.  |
| <b>Supplier's details</b>                                   | : Neill Enterprises Ltd T/A Patch Rubber Tyre and Tube<br>21 Aetna Place<br>Henderson<br>Auckland<br>Toll Free: 0508 837 248 |
| <b>e-mail address of person responsible for this SDS</b>    | : roa-coa@patchrubber.com  |
| <b>Emergency telephone number (with hours of operation)</b> | : +(64)-9 837 2481((Auckland)  |
| <b>Emergency telephone number of the company</b>            | : CHEMTREC: United States and Canada :1-800-424-9300<br>CHEMTREC: Outside United States and Canada: 001-703-527-3887         |

## Section 2. Hazards identification

|                            |   |
|----------------------------|---|
| <b>HSNO Classification</b> | : 3.1 - FLAMMABLE LIQUIDS - Category B<br>6.1 - ACUTE TOXICITY (oral) - Category E<br>6.3 - SKIN IRRITATION - Category A<br>6.4 - EYE IRRITATION - Category A (Irritant)<br>6.5 - SENSITIZATION - Category A (Respiratory)<br>6.9 - SPECIFIC TARGET ORGAN TOXICITY (SINGLE OR REPEATED EXPOSURE) - Category B<br>6.1 - ACUTE TOXICITY (aspiration) (oral) - Category E<br>9.1 - AQUATIC ECOTOXICITY - Category A<br><br>Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity:<br>1.5% |
|----------------------------|---|

This material is classified as hazardous according to criteria in the Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001 and has been classified according to the Hazardous Substances (Classifications) Regulations 2001.

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

### GHS label elements

Symbol



Signal word

: Danger

## Section 2. Hazards identification

- Hazard statements** : Highly flammable liquid and vapor.  
May be harmful if swallowed.  
Causes skin irritation.  
Causes serious eye irritation.  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
May be fatal if swallowed and enters airways.  
May cause drowsiness or dizziness.  
Very toxic to aquatic life with long lasting effects.
- Precautionary statements**
- Prevention** : Wear protective gloves: > 8 hours (breakthrough time): neoprene, butyl rubber, nitrile rubber. Wear eye or face protection. In case of inadequate ventilation wear respiratory protection. Keep away from ignition sources such as heat/sparks/open flame. - No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Avoid release to the environment. Do not breathe vapor. Do not eat, drink or smoke when using this product. Wash thoroughly after handling.
- Response** : Collect spillage. Immediately call a POISON CENTER or doctor/physician. IF SWALLOWED: Do NOT induce vomiting. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Take off contaminated clothing and wash before reuse. Rinse skin with water [or shower]. Wash with plenty of soap and water. If skin irritation occurs, seek medical advice/attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention. IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing.
- Storage** : Store locked up. Store in cool/well-ventilated place.
- Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.

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

## Section 3. Composition/information on ingredients

- Substance/mixture** : Mixture
- Other means of identification** : Not available.
- Product code** : 16-325; 16-326; 16-327

| Ingredient name                            | % (w/w)  | CAS number |
|--|----------|------------|
| Naphtha (petroleum), hydrotreated light    | 60 - 100 | 64742-49-0 |
| heptane                                    | 30 - 45  | 142-82-5   |
| 3-methylhexane                             | 0 - 30   | 589-34-4   |
| methylcyclohexane                          | 0 - 20   | 108-87-2   |
| 2-methylhexane                             | 0 - 15   | 591-76-4   |
| 1,3-Butadiene, 2-methyl-, homopolymer      | 7 - 8    | 9003-31-0  |
| 2,3-dimethylpentane                        | 0 - 5    | 565-59-3   |
| 3-ethylpentane                             | 0 - 5    | 617-78-7   |
| carbon black, respirable other than powder | 1 - 1.5  | 1333-86-4  |
| Isopropyl alcohol                          | 0.1 - 1  | 67-63-0    |

### Section 3. Composition/information on ingredients

|            |         |           |
|------------|---------|-----------|
| zinc oxide | 0.1 - 1 | 1314-13-2 |
| sulfur     | 0.1 - 1 | 7704-34-9 |

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. 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. In the event of any complaints or symptoms, avoid further exposure.
- Ingestion** : Get medical attention immediately. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. 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** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Eye contact** : 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. Get medical attention.

#### Most important symptoms/effects, acute and delayed

##### Potential acute health effects

- Inhalation** : May cause allergy or asthma symptoms or breathing difficulties if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
- Ingestion** : May be harmful if swallowed. May be fatal if swallowed and enters airways. Can cause central nervous system (CNS) depression.
- Skin contact** : Causes skin irritation.
- Eye contact** : Causes serious eye irritation.

##### Over-exposure signs/symptoms

- Inhalation** : Adverse symptoms may include the following:  
wheezing and breathing difficulties  
asthma  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness
- Ingestion** : Adverse symptoms may include the following:  
nausea or vomiting

## Section 4. First aid measures

- Skin** : Adverse symptoms may include the following:  
irritation  
redness
- Eyes** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness

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

- Specific treatments** : Not available.
- Notes to physician** : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Aspiration hazard if swallowed. Can enter lungs and cause damage.  
high concentrations: heartbeat irregularity (arrhythmia)
- 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.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam. Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : Do not use water jet.

- Specific hazards arising from the chemical** : Highly flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard. This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
sulfur oxides  
metal oxide/oxides

- 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.

- Hazchem code** : 3YE

## Section 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures** : 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 spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

**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.

### Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.
- Large spill** : 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. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

**Precautions for safe handling** : Put on appropriate personal protective equipment (see Section 8). 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. Persons with a history of asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not swallow. Avoid breathing vapor or mist. 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. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

**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. Eliminate all ignition sources. Separate from oxidizing 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 unlabeled 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   |
|--|---|
| heptane                                    | <b>NZ HSWA 2015 (New Zealand, 6/2016).</b><br>WES-TWA: 400 ppm 8 hours.<br>WES-TWA: 1640 mg/m <sup>3</sup> 8 hours.<br>WES-STEL: 2050 mg/m <sup>3</sup> 15 minutes.<br>WES-STEL: 500 ppm 15 minutes.  |
| 3-methylhexane                             | <b>ACGIH TLV (United States, 3/2016).</b><br>TWA: 400 ppm 8 hours.<br>TWA: 1640 mg/m <sup>3</sup> 8 hours.<br>STEL: 500 ppm 15 minutes.<br>STEL: 2050 mg/m <sup>3</sup> 15 minutes.   |
| methylcyclohexane                          | <b>NZ HSWA 2015 (New Zealand, 6/2016).</b><br>WES-TWA: 400 ppm 8 hours.<br>WES-TWA: 1610 mg/m <sup>3</sup> 8 hours.   |
| 2-methylhexane                             | <b>ACGIH TLV (United States, 3/2016).</b><br>TWA: 400 ppm 8 hours.<br>TWA: 1640 mg/m <sup>3</sup> 8 hours.<br>STEL: 500 ppm 15 minutes.<br>STEL: 2050 mg/m <sup>3</sup> 15 minutes.   |
| 2,3-dimethylpentane                        | <b>ACGIH TLV (United States, 3/2016).</b><br>TWA: 400 ppm 8 hours.<br>TWA: 1640 mg/m <sup>3</sup> 8 hours.<br>STEL: 500 ppm 15 minutes.<br>STEL: 2050 mg/m <sup>3</sup> 15 minutes.   |
| 3-ethylpentane                             | <b>ACGIH TLV (United States, 3/2016).</b><br>TWA: 400 ppm 8 hours.<br>TWA: 1640 mg/m <sup>3</sup> 8 hours.<br>STEL: 500 ppm 15 minutes.<br>STEL: 2050 mg/m <sup>3</sup> 15 minutes.   |
| carbon black, respirable other than powder | <b>NZ HSWA 2015 (New Zealand, 6/2016).</b><br>WES-TWA: 3 mg/m <sup>3</sup> 8 hours.   |
| Isopropyl alcohol                          | <b>NZ HSWA 2015 (New Zealand, 6/2016).</b><br>WES-TWA: 400 ppm 8 hours.<br>WES-TWA: 983 mg/m <sup>3</sup> 8 hours.<br>WES-STEL: 1230 mg/m <sup>3</sup> 15 minutes.<br>WES-STEL: 500 ppm 15 minutes.   |
| zinc oxide                                 | <b>NZ HSWA 2015 (New Zealand, 6/2016).</b><br>WES-TWA: 10 mg/m <sup>3</sup> 8 hours. Form: Dust<br>WES-TWA: 3 mg/m <sup>3</sup> , (The value for respirable dust.) 8 hours. Form: Fume<br>WES-STEL: 10 mg/m <sup>3</sup> 15 minutes. Form: Fume |

### **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, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.



## Section 8. Exposure controls/personal protection

**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.

### 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. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- 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.
- 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. > 8 hours (breakthrough time): neoprene, butyl rubber, nitrile rubber
- Eye 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.
- Skin 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.

## Section 9. Physical and chemical properties

### Appearance

- Physical state** : Liquid.
- Color** : Black.
- Odor** : Hydrocarbon.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point** : Not available.
- Boiling point** : 93.333°C (200°F)
- Flash point** : -9.4444°C (15°F)
- Evaporation rate** : 4.2 (butyl acetate = 1)
- Flammability (solid, gas)** : Not available.
- Lower and upper explosive (flammable) limits** : Lower: 1%  
Upper: 6.7%
- Vapor pressure** : 5.3 kPa (40 mm Hg) [20°C (68°F)]
- Vapor density** : 3.5 [Air = 1]
- Relative density** : 0.73 [Water = 1]
- Solubility** : Insoluble in the following materials: cold water and hot water.
- Solubility in water** : Not available.
- Partition coefficient: n-octanol/water** : Not available.

## Section 9. Physical and chemical properties

**Auto-ignition temperature** : 203.8°C (398.8°F)

**Decomposition temperature** : Not available.

**Viscosity** : Not available.

**Particle characteristics** : Not available.

### Aerosol product

**Type of aerosol** : Not applicable.

**Heat of combustion** : Not available.

**Ignition distance** : Not applicable.

**Enclosed space ignition - Time equivalent** : Not applicable.

**Enclosed space ignition - Deflagration density** : Not applicable.

**Flame height** : Not applicable.

**Flame duration** : Not applicable.

## Section 10. Stability and reactivity

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

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

**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. Do not allow vapor to accumulate in low or confined areas.

**Incompatible materials** : Reactive or incompatible with the following materials:  
oxidizing materials  
strong acids

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

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

| Product/ingredient name                    | Result                | Species | Dose                 | Exposure |
|--|-----------------------|---------|----------------------|----------|
| heptane                                    | LC50 Inhalation Gas.  | Rat     | 48000 ppm            | 4 hours  |
|  | LC50 Inhalation Vapor | Rat     | 103 g/m <sup>3</sup> | 4 hours  |
| methylcyclohexane                          | LD50 Oral             | Rat     | >3200 mg/kg          | -        |
| carbon black, respirable other than powder | LD50 Dermal           | Rabbit  | >3 g/kg              | -        |
|  | LD50 Oral             | Rat     | >15400 mg/kg         | -        |
| Isopropyl alcohol                          | LD50 Dermal           | Rabbit  | 12800 mg/kg          | -        |
|  | LD50 Oral             | Rat     | 5000 mg/kg           | -        |

**Conclusion/Summary** : May be harmful if swallowed.

#### Irritation/Corrosion



## Section 11. Toxicological information

| Product/ingredient name | Result                   | Species | Score | Exposure                 | Observation |
|-------------------------|--------------------------|---------|-------|--------------------------|-------------|
| heptane                 | Skin - Moderate irritant | Rabbit  | -     | 24 hours                 | -           |
| 3-methylhexane          | Skin - Moderate irritant | Rabbit  | -     | -                        | -           |
| methylcyclohexane       | Skin - Mild irritant     | Rabbit  | -     | 24 hours 500 microliters | -           |
|                         | Skin - Moderate irritant | Rabbit  | -     | -                        | -           |
|                         | Eyes - Mild irritant     | Rabbit  | -     | 24 hours 100 microliters | -           |
| 2-methylhexane          | Skin - Moderate irritant | Rabbit  | -     | -                        | -           |
| 2,3-dimethylpentane     | Skin - Moderate irritant | Rabbit  | -     | -                        | -           |
| 3-ethylpentane          | Skin - Moderate irritant | Rabbit  | -     | -                        | -           |
| Isopropyl alcohol       | Eyes - Moderate irritant | Rabbit  | -     | 24 hours 100 milligrams  | -           |
|                         | Eyes - Moderate irritant | Rabbit  | -     | 10 milligrams            | -           |
|                         | Eyes - Severe irritant   | Rabbit  | -     | 100 milligrams           | -           |
|                         | Skin - Mild irritant     | Rabbit  | -     | 500 milligrams           | -           |
| zinc oxide              | Eyes - Mild irritant     | Rabbit  | -     | 24 hours 500 milligrams  | -           |
|                         | Skin - Mild irritant     | Rabbit  | -     | 24 hours 500 milligrams  | -           |
| sulfur                  | Skin - Erythema/Eschar   | Rabbit  | 3     | 24 hours                 | -           |

### Conclusion/Summary

- Skin** : Causes skin irritation.
- Eyes** : Causes serious eye irritation.

### Sensitization

#### Conclusion/Summary

- Respiratory** : May cause allergy or asthma symptoms or breathing difficulties if inhaled.

### Mutagenicity

- Conclusion/Summary** : Not available.

### Carcinogenicity

- Conclusion/Summary** : Not available.

### Reproductive toxicity

- Conclusion/Summary** : Not available.

### Teratogenicity

- Conclusion/Summary** : Not available.

### Specific target organ toxicity

Not available.

### Aspiration hazard

#### Name

Black Repair Cement

## Section 11. Toxicological information

**Information on the likely routes of exposure** : Routes of entry anticipated: Oral, Dermal, Inhalation, Ocular.

### Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : May cause allergy or asthma symptoms or breathing difficulties if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
- Skin contact** : Causes skin irritation.
- Ingestion** : May be harmful if swallowed. May be fatal if swallowed and enters airways. Can cause central nervous system (CNS) depression.

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

- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness
- Inhalation** : Adverse symptoms may include the following:  
wheezing and breathing difficulties  
asthma  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness
- Ingestion** : Adverse symptoms may include the following:  
nausea or vomiting

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

#### Long term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

#### Potential chronic health effects

Not available.

- Conclusion/Summary** : Not available.
- General** : No known significant effects or critical hazards.
- Inhalation** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
- Ingestion** : No known significant effects or critical hazards.
- Skin contact** : No known significant effects or critical hazards.
- Eye contact** : No known significant effects or critical hazards.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : No known significant effects or critical hazards.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : No known significant effects or critical hazards.

## Section 11. Toxicological information

### Numerical measures of toxicity

#### Acute toxicity estimates

| Route  | ATE value      |
|--------|----------------|
| Oral   | 2746.3 mg/kg   |
| Dermal | 220617.7 mg/kg |

## Section 12. Ecological information

**Ecotoxicity** : Water polluting material. May be harmful to the environment if released in large quantities. This material is very toxic to aquatic life with long lasting effects.

### Aquatic and terrestrial toxicity

| Product/ingredient name                    | Result                               | Species   | Exposure |
|--|--------------------------------------|---|----------|
| heptane                                    | Acute LC50 375000 µg/l Fresh water   | Fish - Oreochromis mossambicus                                      | 96 hours |
| methylcyclohexane                          | Acute LC50 5800 µg/l Marine water    | Fish - Morone saxatilis - Juvenile (Fledgling, Hatchling, Weanling) | 96 hours |
| carbon black, respirable other than powder | Acute EC50 37.563 mg/l Fresh water   | Daphnia - Daphnia magna - Neonate                                   | 48 hours |
| Isopropyl alcohol                          | Acute LC50 1400000 µg/l Marine water | Crustaceans - Crangon crangon                                       | 48 hours |
|  | Acute LC50 4200 mg/l Fresh water     | Fish - Rasbora heteromorpha   | 96 hours |
| zinc oxide                                 | Acute IC50 1.85 mg/l Marine water    | Algae - Skeletonema costatum  | 96 hours |
|  | Acute IC50 46 µg/l Fresh water       | Algae - Pseudokirchneriella subcapitata - Exponential growth phase  | 72 hours |
|  | Acute LC50 98 µg/l Fresh water       | Daphnia - Daphnia magna - Neonate                                   | 48 hours |
|  | Acute LC50 1.1 ppm Fresh water       | Fish - Oncorhynchus mykiss  | 96 hours |
| sulfur                                     | Acute LC50 >100 ppm Fresh water      | Fish - Oncorhynchus mykiss  | 96 hours |

**Conclusion/Summary** : Very toxic to aquatic life with long lasting effects.

### Persistence/degradability

**Conclusion/Summary** : There are no data available on the mixture itself.

### Bioaccumulative potential

| Product/ingredient name | LogP <sub>ow</sub> | BCF    | Potential |
|-------------------------|--------------------|--------|-----------|
| heptane                 | 4.66               | 552    | high      |
| methylcyclohexane       | 3.61               | 186.21 | low       |
| Isopropyl alcohol       | 0.05               | -      | low       |
| zinc oxide              | -                  | 60960  | high      |

### Mobility in soil

## Section 12. Ecological information

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.







**Mobility** : 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 minimized 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. Vapor 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 spilled material and runoff and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

|                                   | New Zealand   | ADG   | UN  | ADR/RID  | IMDG  | IATA  |
|-----------------------------------|---|---|---|--|---|---|
| <b>UN number</b>                  | UN1133  | UN1133  | UN1133  | UN1133   | UN1133  | UN1133  |
| <b>UN proper shipping name</b>    | ADHESIVES.<br>Marine pollutant<br>(methylcyclohexane, zinc oxide)                   | ADHESIVES   | ADHESIVES   | ADHESIVES  | ADHESIVES   | Adhesives   |
| <b>Transport hazard class(es)</b> | 3   | 3   | 3   | 3  | 3   | 3   |
| <b>Label</b>                      |  |  |  |  |  |  |
| <b>Packing group</b>              | II  | II  | II  | II   | II  | II  |
| <b>Environmental hazards</b>      | Yes.  | Yes. The environmentally hazardous substance mark is not required.                  | Yes. The environmentally hazardous substance mark is not required.                  | Yes.   | Marine Pollutant: Yes   | Yes. The environmentally hazardous substance mark is not required.                    |

### Additional information

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

**ADG Class** : **Hazchem code** •3YE

## Section 14. Transport information

- IATA Class** : 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
- IMDG Class** : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.  
**Emergency schedules** F-E, S-D
- 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 Annex II of MARPOL and the IBC Code** : Not applicable.

## Section 15. Regulatory information

- HSNO Approval Number** : HSR002495
- HSNO Group Standard** : Additives, Process Chemicals and Raw Materials (Flammable)
- HSNO Classification** : 3.1 - FLAMMABLE LIQUIDS - Category B  
 6.1 - ACUTE TOXICITY (oral) - Category E  
 6.3 - SKIN IRRITATION - Category A  
 6.4 - EYE IRRITATION - Category A (Irritant)  
 6.5 - SENSITIZATION - Category A (Respiratory)  
 6.9 - SPECIFIC TARGET ORGAN TOXICITY (SINGLE OR REPEATED EXPOSURE) - Category B  
 6.1 - ACUTE TOXICITY (aspiration) (oral) - Category E  
 9.1 - AQUATIC ECOTOXICITY - Category A

### International regulations

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

Not listed.

#### Montreal Protocol (Annexes A, B, C, E)

Not listed.

#### 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** : All components are listed or exempted.
- China** : All components are listed or exempted.
- New Zealand** : All components are listed or exempted.
- Philippines** : All components are listed or exempted.
- Republic of Korea** : All components are listed or exempted.
- Taiwan** : All components are listed or exempted.
- United States** : All components are listed or exempted.

## Section 16. Other information

### History

|                                       |  |
|---------------------------------------|--|
| <b>Date of printing</b>               | : 05/11/2018   |
| <b>Date of issue/Date of revision</b> | : 05/11/2018   |
| <b>Date of previous issue</b>         | : No previous validation   |
| <b>Version</b>                        | : 1  |
| <b>Key to abbreviations</b>           | : ADG = Australian Dangerous Goods<br>ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road<br>ATE = Acute Toxicity Estimate<br>BCF = Bioconcentration Factor<br>GHS = Globally Harmonized System of Classification and Labelling of Chemicals<br>HSNO = Hazardous Substances and New Organisms<br>IATA = International Air Transport Association<br>IBC = Intermediate Bulk Container<br>IMDG = International Maritime Dangerous Goods<br>LogPow = logarithm of the octanol/water partition coefficient<br>MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)<br>RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail<br>UN = United Nations |

### Procedure used to derive the classification

| Classification   | Justification |
|--|---------------|
| 3.1 - FLAMMABLE LIQUIDS - Category B<br>6.1 - ACUTE TOXICITY (oral) - Category E<br>6.3 - SKIN IRRITATION - Category A<br>6.4 - EYE IRRITATION - Category A (Irritant)<br>6.5 - SENSITIZATION - Category A (Respiratory)<br>6.9 - SPECIFIC TARGET ORGAN TOXICITY (SINGLE OR REPEATED EXPOSURE) - Category B<br>6.1 - ACUTE TOXICITY (aspiration) (oral) - Category E<br>9.1 - AQUATIC ECOTOXICITY - Category A |               |

**References** : Not available.

Indicates information that has changed from previously issued version.

### Notice to reader

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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.