# Safety Data Sheet

## Hazardous, NON-Dangerous Goods

## 1. MATERIAL AND SUPPLY COMPANY IDENTIFICATION

**Product name:** Vulkem NEM Plus

**Recommended use:** Liquid applied waterproofing membrane.

**Supplier:** Tremco CPG Australia Pty Ltd
**ABN:** 25 000 024 064
**Street Address:** 12/4 Southridge Street
Eastern Creek NSW 2766
**Telephone:** 02 9638 2755
**Facsimile:** 02 9638 2955

**Emergency Telephone number:** **02 9037 2994 (Aus) +1 703-741-5500 (Worldwide)**

## 2. HAZARDS IDENTIFICATION

**This material is hazardous according to the criteria of Safe Work Australia GHS 7.**

**Signal Word**
Danger

**Hazard Classifications**
Flammable Liquids - Category 4
Skin Corrosion/Irritation - Category 2
Eye Damage/Irritation - Category 1
Sensitisation - Skin - Category 1
Germ Cell Mutagenicity - Category 2
Carcinogenicity - Category 1A
Reproductive Toxicity - Category 2
Specific Target Organ Toxicity (Single Exposure) - Category 3 Respiratory Tract Irritation
Acute Hazard to the Aquatic Environment - Category 2
Chronic Hazard to the Aquatic Environment - Category 3

**Hazard Statements**

| | |
|---|---|
| H227 | Combustible liquid. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H318 | Causes serious eye damage. |
| H335 | May cause respiratory irritation. |
| H341 | Suspected of causing genetic defects . |
| H350 | May cause cancer . |
| H361 | Suspected of damaging fertility or the unborn child . |
| H401 | Toxic to aquatic life. |
| H412 | Harmful to aquatic life with long lasting effects. |

**Prevention Precautionary Statements**

| | |
|---|---|
| P102 | Keep out of reach of children. |
| P103 | Read carefully and follow all instructions. |
| P202 | Do not handle until all safety precautions have been read and understood. |

| | |
|---|---|
| P210 | Keep away from heat/sparks/open flames/hot surfaces. No smoking. |
| P261 | Avoid breathing dust, fume, gas, mist, vapours or spray. |
| P264 | Wash hands, face and all exposed skin thoroughly after handling. |
| P271 | Use only outdoors or in a well-ventilated area. |
| P272 | Contaminated work clothing should not be allowed out of the workplace. |
| P273 | Avoid release to the environment. |
| P280 | Wear protective gloves/protective clothing including eye/face protection. |

**Response Precautionary Statements**

| | |
|---|---|
| P101 | If medical advice is needed, have product container or label at hand. |
| P302+P352 | IF ON SKIN: Wash with plenty of water and soap. |
| P304+P340 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P310 | Immediately call a POISON CENTER/doctor/insert appropriate source of emergency medical advice. |
| P333+P313 | If skin irritation or rash occurs: Get medical advice/attention. |
| P362+P364 | Take off contaminated clothing and wash it before reuse |
| P370+P378 | In case of fire: Use (insert appropriate media) to extinguish. |

**Storage Precautionary Statements**

| | |
|---|---|
| P403+P233 | Store in a well-ventilated place. Keep container tightly closed. |
| P403+P235 | Store in a well-ventilated place. Keep cool. |
| P405 | Store locked up. |

**Disposal Precautionary Statement**

| | |
|---|---|
| P501 | Dispose of contents/container in accordance with local, regional, national and international regulations. |

**Poison Schedule:**

**DANGEROUS GOOD CLASSIFICATION**

Not classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and the "New Zealand NZS5433: Transport of Dangerous Goods on Land".

## 3. COMPOSITION INFORMATION

| CHEMICAL ENTITY | CAS NO | PROPORTION |
|---|---|---|
| Limestone | 1317-65-3 | 30-60 % |
| Isocyanic acid, polymethylenepolyphenylene ester, polymer with .alpha.-hydro-.omega.-hydroxypoly[oxy(methyl-1,2-ethanediyl)] | 53862-89-8 | 30-60 % |
| 1,2-Benzenedicarboxylic acid, diisononyl ester | 28553-12-0 | 10-30 % |
| Solvent naphtha, petroleum, light aromatic | 64742-95-6 | 10-30 % |
| Titanium oxide (TiO2) | 13463-67-7 | 0 % |
| Ingredients determined to be Non-Hazardous | | Balance |
| | | 100% |

## 4. FIRST AID MEASURES

If poisoning occurs, contact a doctor or Poisons Information Centre (Phone Australia 131 126, New Zealand 0800 764 766).

**Inhalation:** Remove victim from exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. Seek medical advice if effects persist.

**Skin Contact:** Effects may be delayed. If skin or hair contact occurs, immediately remove contaminated clothing and flush skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre or a Doctor; or for 15 minutes and transport to Doctor or Hospital. For gross contamination, immediately drench with water and remove clothing. Continue to flush skin and hair with plenty of water (and soap if material is insoluble). For skin burns, cover with a clean, dry dressing until medical help is available. If blistering occurs, do NOT break blisters. If swelling, redness, blistering, or irritation occurs seek medical assistance.

**Eye contact:** Immediately irrigate with copious quantities of water for 15 minutes. Eyelids to be held open. Remove clothing if contaminated and wash skin. Urgently seek medical assistance. Transport to hospital or medical centre.

**Ingestion:** Rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water to drink. Never give anything by the mouth to an unconscious patient. If vomiting occurs give further water. Seek medical advice.

**PPE for First Aiders:** Wear overalls, gloves, safety glasses, respirator. Use with adequate ventilation. If inhalation risk exists wear organic vapour/particulate respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Available information suggests that gloves made from should be suitable for intermittent contact. However, due to variations in glove construction and local conditions, the user should make a final assessment. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

**Notes to physician:** Treat symptomatically. Effects may be delayed. Can cause corneal burns.

## 5. FIRE FIGHTING MEASURES

**Hazchem Code:** Not applicable.

**Suitable extinguishing media:** If material is involved in a fire use water fog (or if unavailable fine water spray), alcohol resistant foam, standard foam, dry agent (carbon dioxide, dry chemical powder).

**Specific hazards:** Combustible liquid.

**Fire fighting further advice:** On burning or decomposing may emit toxic fumes. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to vapour or products of combustion or decomposition.

## 6. ACCIDENTAL RELEASE MEASURES

### SMALL SPILLS

Environmental hazard - contain spillage.Remove all ignition sources.Clean up all spills immediately.Avoid breathing vapours and contact with skin and eyes.Control personal contact with the substance, by using protective equipment.Contain and absorb spill with sand, earth, inert material or vermiculite.Wipe up. Place in a suitable, labelled container for waste disposal.

### LARGE SPILLS

Environmental hazard - contain spillage.Avoid contamination with water, alkalies and detergent solutions.Material reacts with water and generates gas, pressurises containers with even drum rupture resulting.DO NOT reseal container if contamination is suspected.Open all containers with care.DO NOT touch the spill materialModerate hazard.Clear area of personnel and move upwind.Alert Fire Brigade and tell them location and nature of hazard.Wear breathing apparatus plus protective gloves.Prevent, by any means available, spillage from entering drains or water course.No smoking, naked lights or ignition sources.Increase ventilation.Stop leak if safe to do so.Contain spill with sand, earth or vermiculite.Collect recoverable product into labelled containers for recycling.Absorb remaining product with sand, earth or vermiculite.Collect solid residues and seal in labelled drums for disposal.Wash area and prevent runoff into drains.If contamination of drains or waterways occurs, advise emergency services.

**Dangerous Goods - Initial Emergency Response Guide No:** Not applicable

## 7. HANDLING AND STORAGE

**Handling:** DO NOT allow clothing wet with material to stay in contact with skin.Overheating of ethoxylates/alkoxylates in air should be avoided. When some ethoxylates are heated vigorously in the presence of air or oxygen, at temperatures exceeding 160 C, they may undergo exothermic oxidative degeneration resulting in self-heating and autoignition.Nitrogen blanketing will minimise the potential for ethoxylate oxidation. Prolonged storage in the presence of air or oxygen may cause product degradation. Oxidation is not expected when stored under a nitrogen atmosphere. Inert gas blanket and breathing system needed to maintain color stability. Use dry inert gas having at least -40 C dew point.Trace quantities of ethylene oxide may be present in the material. Although these may accumulate in the headspace of storage and transport vessels, concentrations are not expected to exceed levels which might produce a flammability or worker exposure hazard.Avoid all personal contact, including inhalation.Wear protective clothing when risk of exposure occurs.Use in a well-ventilated area.Prevent concentration in hollows and sumps.DO NOT enter confined spaces until atmosphere has been checked.Avoid smoking, naked lights or ignition sources.Avoid contact with incompatible materials.When handling, DO NOT eat, drink or smoke.Keep containers securely sealed when not in use.Avoid physical damage to containers.Always wash hands with soap and water after handling.Work clothes should be laundered separately.Use good occupational work practice.Observe manufacturer's storage and handling recommendations contained within this SDS.Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions.

**Storage:** Store in original containers.Keep containers securely sealed.No smoking, naked lights or ignition sources.Store in a cool, dry, well-ventilated area.Store away from incompatible materials and foodstuff containers.Protect containers against physical damage and check regularly for leaks.Observe manufacturer's storage and handling recommendations contained within this SDS.STORAGE INCOMPATIBILITYSegregate from alcohol, water.· Avoid reaction with water, alcohols and detergent solutions. Isocyanates are electrophiles, and as such they are reactive toward a variety of nucleophiles including alcohols, amines, and even water. Upon treatment with an alcohol, an isocyanate forms a urethane linkage. If a di-isocyanate is treated with a compound containing two or more hydroxyl groups, such as a diol or a polyol, polymer chains are formed, which are known as polyurethanes. Reaction between a di-isocyanate and a compound containing two or more amine groups, produces long polymer chains known as polyureas.· Isocyanates and thioisocyanates are incompatible with many classes of compounds, reacting exothermically to release toxic gases. Reactions with amines, strong bases, aldehydes, alcohols, alkali metals, ketones, mercaptans, strong oxidisers, hydrides, phenols, and peroxides can cause vigorous releases of heat. Acids and bases initiate polymerisation reactions in these materials.Isocyanates easily form adducts with carbodiimides, isothiocyanates, ketenes, or with substrates containing activated CC or CN bonds.· Some isocyanates react with water to form amines and liberate carbon dioxide. This reaction may also generate large volumes of foam and heat. Foaming spaces may produce pressure in confined spaces or containers. Gas generation may pressurise drums to the point of rupture.· Do NOT reseal container if contamination is expected· Open all containers with care· Base-catalysed reactions of isocyanates with alcohols should be carried out in inert solvents. Such reactions in the absence of solvents often occur with explosive violence,· Isocyanates will attack and embrittle some plastics and rubbers.· The isocyanate anion is a pseudohalide (syn pseudohalogen) whose chemistry, resembling that of the true halogens, allows it to substitute for halogens in several classes of chemical compounds.. The behavior and chemical properties of the several pseudohalides are identical to that of the true halide ions.Avoid strong acids, bases.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**National occupational exposure limits:**

| | TWA | | STEL | | NOTICES |
|---|---|---|---|---|---|
| | ppm | mg/m3 | ppm | mg/m3 | |
| Titanium dioxide | - | 10 | - | - | - |

As published by Safe Work Australia.

TWA - The time-weighted average airborne concentration over an eight-hour working day, for a five-day working week over an entire working life.

STEL (Short Term Exposure Limit) - the average airborne concentration over a 15 minute period which should not be exceeded at any time during a normal eight-hour workday.

These Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

If the directions for use on the product label are followed, exposure of individuals using the product should not exceed the above standard. The standard was created for workers who are routinely, potentially exposed during product manufacture.

**Biological Limit Values:** As per the "National Model Regulations for the Control of Workplace Hazardous Substances (Safe Work Australia)" the ingredients in this material do not have a Biological Limit Allocated.

**Engineering Measures:** Ensure ventilation is adequate to maintain air concentrations below Exposure Standards. Use only in well ventilated areas. Use with local exhaust ventilation or while wearing appropriate respirator.

**Personal Protection Equipment:** OVERALLS, GLOVES, SAFETY GLASSES, RESPIRATOR.

Personal protective equipment (PPE) must be suitable for the nature of the work and any hazard associated with the work as identified by the risk assessment conducted.

Wear overalls, gloves, safety glasses, respirator. Use with adequate ventilation. If inhalation risk exists wear organic vapour/particulate respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Available information suggests that gloves made from should be suitable for intermittent contact. However, due to variations in glove construction and local conditions, the user should make a final assessment. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

*RECOMMENDATIONS FOR CONSUMER USE:*
Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59].Organic vapour respirators with particulate pre- filters and powered, air-purifying respirators are NOT suitable.Do NOT wear natural rubber (latex gloves).Isocyanate resistant materials include Teflon, Viton, nitrile rubber and some PVA gloves.Protective gloves and overalls should be worn as specified in the appropriate national standard.Contaminated garments should be removed promptly and should not be re-used until they have been decontaminated.NOTE: Natural rubber, neoprene, PVC can be affected by isocyanates.DO NOT use skin cream unless necessary and then use only minimum amount.Isocyanate vapour may be absorbed into skin cream and this increases hazard.

**Hygiene measures:** Keep away from food, drink and animal feeding stuffs. When using do not eat, drink or smoke. Wash hands prior to eating, drinking or smoking. Avoid contact with clothing. Avoid eye contact and skin contact. Avoid inhalation of vapour, mist or aerosols. Ensure that eyewash stations and safety showers are close to the workstation location.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Form:** Liquid

| | |
|---|---|
| **Colour:** | N/A |
| **Odour:** | N/A |

| | |
|---|---|
| **Solubility:** | Immiscible in water. |
| **Relative Vapour Density (air=1):** | 1.39 |
| **Vapour Pressure:** | N/A |
| **Flash Point (°C):** | 80 |
| **Autoignition Temperature (°C):** | N/A |
| **Melting Point/Range (°C):** | Not applicable |
| **Boiling Point/Range (°C):** | N/A |
| **pH:** | Not applicable |
| **Viscosity:** | 14000 |

(Typical values only - consult specification sheet)
N Av = Not available, N App = Not applicable

## 10. STABILITY AND REACTIVITY

**Chemical stability:** Unstable in the presence of incompatible materials.Product is considered stable.Hazardous polymerisation will not occur.Presence of elevated temperatures.

**Conditions to avoid:** See Section 7.

**Incompatible materials:** - Segregate from alcohol, water.- Avoid reaction with water, alcohols and detergent solutions. Isocyanates are electrophiles, and as such they are reactive toward a variety of nucleophiles including alcohols, amines, and even water. Upon treatment with an alcohol, an isocyanate forms a urethane linkage. If a di-isocyanate is treated with a compound containing two or more hydroxyl groups, such as a diol or a polyol, polymer chains are formed, which are known as polyurethanes. Reaction between a di-isocyanate and a compound containing two or more amine groups, produces long polymer chains known as polyureas.- Isocyanates and thioisocyanates are incompatible with many classes of compounds, reacting exothermically to release toxic gases. Reactions with amines, strong bases, aldehydes, alcohols, alkali metals, ketones, mercaptans, strong oxidisers, hydrides, phenols, and peroxides can cause vigorous releases of heat. Acids and bases initiate polymerisation reactions in these materials.- Isocyanates easily form adducts with carbodiimides, isothiocyanates, ketenes, or with substrates containing activated CC or CN bonds.- Some isocyanates react with water to form amines and liberate carbon dioxide. This reaction may also generate large volumes of foam and heat. Foaming spaces may produce pressure in confined spaces or containers. Gas generation may pressurise drums to the point of rupture.- Base-catalysed reactions of isocyanates with alcohols should be carried out in inert solvents. Such reactions in the absence of solvents often occur with explosive violence,- Isocyanates will attack and embrittle some plastics and rubbers.- The isocyanate anion is a pseudohalide (syn pseudohalogen) whose chemistry, resembling that of the true halogens, allows it to substitute for halogens in several classes of chemical compounds.. The behavior and chemical properties of the several pseudohalides are identical to that of the true halide ions.- Avoid strong acids, bases.

**Hazardous decomposition products:** See Section 5.

**Hazardous reactions:** - Segregate from alcohol, water.- Avoid reaction with water, alcohols and detergent solutions. Isocyanates are electrophiles, and as such they are reactive toward a variety of nucleophiles including alcohols, amines, and even water. Upon treatment with an alcohol, an isocyanate forms a urethane linkage. If a di-isocyanate is treated with a compound containing two or more hydroxyl groups, such as a diol or a polyol, polymer chains are formed, which are known as polyurethanes. Reaction between a di-isocyanate and a compound containing two or more amine groups, produces long polymer chains known as polyureas.- Isocyanates and thioisocyanates are incompatible with many classes of compounds, reacting exothermically to release toxic gases. Reactions with amines, strong bases, aldehydes, alcohols, alkali metals, ketones, mercaptans, strong oxidisers, hydrides, phenols, and peroxides can cause vigorous releases of heat. Acids and bases initiate polymerisation reactions in these materials.- Isocyanates easily form adducts with carbodiimides, isothiocyanates, ketenes, or with substrates containing activated CC or CN bonds.- Some isocyanates react with water to form amines and liberate carbon dioxide. This reaction may also generate large volumes of foam and heat. Foaming spaces may produce pressure in confined spaces or containers. Gas generation may pressurise drums to the point of rupture.- Base-catalysed reactions of isocyanates with alcohols should be carried out in inert solvents. Such reactions in the absence of solvents often occur with explosive violence,- Isocyanates will attack and embrittle some plastics and rubbers.- The isocyanate anion is a pseudohalide (syn pseudohalogen) whose chemistry, resembling that of the true halogens, allows it to substitute for halogens in several classes of chemical compounds.. The behavior and chemical properties of the several pseudohalides are identical to that of the true halide ions.- Avoid strong acids, bases.

## 11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

### Acute Effects

**Inhalation:** Evidence shows, or practical experience predicts, that the material produces irritation of the respiratory system, in a substantial number of individuals, following inhalation. In contrast to most organs, the lung is able to respond to a chemical insult by first removing or neutralising the irritant and then repairing the damage. The repair process, which initially evolved to protect mammalian lungs from foreign matter and antigens, may however, produce further lung damage resulting in the impairment of gas exchange, the primary function of the lungs. Respiratory tract irritation often results in an inflammatory response involving the recruitment and activation of many cell types, mainly derived from the vascularsystem.- Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by narcosis, reduced alertness, loss of reflexes, lack of coordination and vertigo.- Inhalation of vapours or aerosols (mists, fumes), generated by the material during the course of normal handling, may be damaging to the health of the individual.- A significant number of individuals exposed to mixed trimethylbenzenes complained of nervousness, tension, anxiety and asthmatic bronchitis. Peripheral blood showed a tendency to hypochromic anaemia and a deviation from normal in coagulability of the blood. Hydrocarbon concentrations ranged from 10 to 60 ppm. Contamination of the mixture with benzene may have been responsible for the blood dyscrasias. High concentrations of mesitylene vapour (5000 to 9000 ppm) caused central nervous system depression in mice. Similar exposures of pseudocumene also produced evidence of CNS involvement.- The vapour/mist may be highly irritating to the upper respiratory tract and lungs; the response may be severe enough to produce bronchitis and pulmonary oedema. Possible neurological symptoms arising from isocyanate exposure include headache, insomnia, euphoria, ataxia, anxiety neurosis, depression and paranoia. Gastrointestinal disturbances are characterised by nausea and vomiting. Pulmonary sensitisation may produce asthmatic reactions ranging from minor breathing difficulties to severe allergic attacks; this may occur following a single acute exposure or may develop without warning for several hours after exposure. Sensitized people can react to very low doses, and should not be allowed to work in situations allowing exposure to this material. Continued exposure of sensitised persons may lead to possible long term respiratoryimpairment.- Inhalation hazard is increased at higher temperatures.

**Skin contact:** - The material produces moderate skin irritation; evidence exists, or practical experience predicts, that the material either - produces moderate inflammation of the skin in a substantial number of individuals following direct contact, and/or - produces significant, but moderate, inflammation when applied to the healthy intact skin of animals (for up to four hours), such inflammation being present twenty-four hours or more after the end of the exposure period.- Skin irritation may also be present after prolonged or repeated exposure; this may result in a form of contact dermatitis (nonallergic). The dermatitis is often characterised by skin redness (erythema) and swelling (oedema) which may progress to blistering (vesiculation), scaling and thickening of the epidermis. At the microscopic level there may be intercellular oedema of the spongy layer of the skin (spongiosis) andintracellular oedema of the epidermis.- Skin contact with the material may damage the health of the individual; systemic effects may result following absorption.- Open cuts, abraded or irritated skin should not be exposed to this material.- Entry into the blood-stream through, for example, cuts, abrasions, puncture wounds or lesions, may produce systemic injury with harmful effects.- Examine the skin prior to the use of the material and ensure that any external damage is suitably protected. A skin sensitiser. Repeated or prolonged skin contact may lead to allergic contact dermatitis.

**Ingestion:** - Accidental ingestion of the material may be damaging to the health of the individual.

**Eye contact:** - When applied to the eye(s) of animals, the material produces severe ocular lesions which are present twenty-four hours or more after instillation.

### Acute toxicity

**Inhalation:** This material has been classified as not hazardous for acute inhalation exposure. Acute toxicity estimate (based on ingredients): $LC_{50}$ > 20.0 mg/L for vapours or $LC_{50}$ > 5.0 mg/L for dust and mist.

calcium carbonate LC50 (Rat): >3 mg/l4h[1] (Method: inhalation)
diisononyl phthalate LC50 (Rat): >4.4 mg/l4h[1] (Method: inhalation)
naphtha petroleum, light aromatic solvent LC50 (Rat): >4.42 mg/L4h[1] (Method: inhalation)
titanium dioxide LC50 (Rat): >2.28 mg/l4h[1] (Method: inhalation)

**Skin contact:** This material has been classified as not hazardous for acute dermal exposure. Acute toxicity estimate (based on ingredients): $LD_{50}$ > 2,000 mg/Kg bw

>=10000 mg/kg[2] LD50 (Guinea pig): >=10000 mg/kg[2] (Method: dermal)
diisononyl phthalate LD50 (Rabbit): >3160 mg/kg[2] (Method: dermal)
naphtha petroleum, light aromatic solvent LD50 (Rabbit): >1900 mg/kg[1] (Method: dermal)
calcium carbonate LD50 (Rat): >2000 mg/kg[1] (Method: dermal)

**Ingestion:** This material has been classified as not hazardous for acute ingestion exposure. Acute toxicity estimate (based on ingredients): $LD_{50}$ > 2,000 mg/Kg bw

calcium carbonate LD50 (Rat): >2000 mg/kg[1] (Method: oral)
diisononyl phthalate LD50 (Rat): >10000 mg/kg[2] (Method: oral)
naphtha petroleum, light aromatic solvent LD50 (Rat): >4500 mg/kg[1] (Method: oral)
titanium dioxide LD50 (Rat): >=2000 mg/kg[1] (Method: oral)

**Corrosion/Irritancy:** Eye: this material has been classified as a Category 1 Hazard (irreversible effects to eyes). Skin: this material has been classified as a Category 2 Hazard (reversible effects to skin).

**Sensitisation:** Inhalation: this material has been classified as not a respiratory sensitiser. Skin: this material has been classified as a Category 1 Hazard (skin sensitiser).

**Aspiration hazard:** This material has been classified as not an aspiration hazard.

**Specific target organ toxicity (single exposure):** This material has been classified as a Category 3 Hazard. Exposure via inhalation may result in respiratory irritation.

**Chronic Toxicity**

**Mutagenicity:** This material has been classified as a Category 2 Hazard.

**Carcinogenicity:** This material has been classified as a Category 1A Hazard.

**Reproductive toxicity (including via lactation):** This material has been classified as a Category 2 Hazard.

**Specific target organ toxicity (repeat exposure):** This material has been classified as not a specific hazard to target organs by repeat exposure.

## 12. ECOLOGICAL INFORMATION

Avoid contaminating waterways.

**Acute aquatic hazard:** This material has been classified as a Category Acute 2 Hazard. Acute toxicity estimate (based on ingredients): > 1 ≤ 10 mg/L

titanium dioxide 48hr EC50 (algae): 1.9mg/l
diisononyl phthalate 48hr EC50 (crustacea): >0.086mg/l
naphtha petroleum, light aromatic solvent 48hr EC50 (crustacea): 6.14mg/l
calcium carbonate 72hr EC50 (algae): >14mg/l
diisononyl phthalate 72hr EC50 (algae): >88mg/l
naphtha petroleum, light aromatic solvent 72hr EC50 (algae): 19mg/l
titanium dioxide 72hr EC50 (algae): 3.75-7.58mg/l
diisononyl phthalate 96hr EC50 (algae): >2.8mg/l

naphtha petroleum, light aromatic solvent 96hr EC50 (algae): 64mg/l
titanium dioxide 96hr EC50 (algae): 179.05mg/l
calcium carbonate 96hr LC50 (fish): >165200mg/L
diisononyl phthalate 96hr LC50 (fish): >0.1mg/l
titanium dioxide 96hr LC50 (fish): 1.85-3.06mg/l

**Long-term aquatic hazard:** This material has been classified as a Category Chronic 3 Hazard. Non-rapidly or rapidly degradable substance for which there are adequate chronic toxicity data available OR in the absence of chronic toxicity data, Acute toxicity estimate (based on ingredients): 10 - 100 mg/L, where the substance is not rapidly degradable and/or BCF ≥ 500 and/or log $K_{ow}$ ≥ 4.

**Ecotoxicity:** Toxic to aquatic organisms.Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.DO NOT discharge into sewer or waterways.

**Persistence and degradability:** diisononyl phthalate - Persistence: Water/Soil - HIGH - diisononyl phthalate - Persistence: Air - HIGH. titanium dioxide - Persistence: Water/Soil - HIGH - titanium dioxide - Persistence: Air - HIGH

**Bioaccumulative potential:** diisononyl phthalate LOW (BCF = 183.8)titanium dioxide LOW (BCF = 10)

**Mobility:** diisononyl phthalate LOW (KOC = 467200)titanium dioxide LOW (KOC = 23.74)

## 13. DISPOSAL CONSIDERATIONS

- DO NOT allow wash water from cleaning or process equipment to enter drains.- It may be necessary to collect all wash water for treatment before disposal.- In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.- Where in doubt contact the responsible authority.- DO NOT recycle spilled material.- Consult State Land Waste Management Authority for disposal.- Neutralise spill material carefully and decontaminate empty containers and spill residues with 10% ammonia solution plus detergent or a proprietary decontaminant prior to disposal.- DO NOT seal or stopper drums being decontaminated as CO2 gas is generated and may pressurise containers.- Puncture containers to prevent re-use.- Bury or incinerate residues at an approved site.

## 14. TRANSPORT INFORMATION

### ROAD AND RAIL TRANSPORT
Not classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and the "New Zealand NZS5433: Transport of Dangerous Goods on Land".

### MARINE TRANSPORT
Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

### AIR TRANSPORT
Not classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

## 15. REGULATORY INFORMATION

**This material is not subject to the following international agreements:**
Montreal Protocol (Ozone depleting substances)
The Stockholm Convention (Persistent Organic Pollutants)
The Rotterdam Convention (Prior Informed Consent)
Basel Convention (Hazardous Waste)
International Convention for the Prevention of Pollution from Ships (MARPOL)

**This material/constituent(s) is covered by the following requirements:**

The Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) established under the Therapeutic Goods Act (Commonwealth): .

## 16. OTHER INFORMATION

Reason for issue: First Issue

This information was prepared in good faith from the best information available at the time of issue. It is based on the present level of research and to this extent we believe it is accurate. However, no guarantee of accuracy is made or implied and since conditions of use are beyond our control, all information relevant to usage is offered without warranty. The manufacturer will not be held responsible for any unauthorised use of this information or for any modified or altered versions.

If you are an employer it is your duty to tell your employees, and any others that may be affected, of any hazards described in this sheet and of any precautions that should be taken.

Safety Data Sheets are updated frequently. Please ensure you have a current copy.