

TC891 PART B

BARNES PRODUCTS PTY LTD

Chemwatch Hazard Alert Code: 2

Chemwatch: 5246-34

Version No: 5.1

Safety Data Sheet according to the Health and Safety at Work (Hazardous Substances) Regulations 2017

Issue Date: 16/03/2023

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S.GHS.NZL.EN.E

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

Product Identifier

| | |
|-------------------------------|----------------|
| Product name | TC891 PART B |
| Chemical Name | Not Applicable |
| Synonyms | TC-891 PART B |
| Chemical formula | Not Applicable |
| Other means of identification | Not Available |

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

| | |
|--------------------------|------------------------|
| Relevant identified uses | Polyurethane curative. |
|--------------------------|------------------------|

Details of the manufacturer or supplier of the safety data sheet

| | |
|-------------------------|--|
| Registered company name | BARNES PRODUCTS PTY LTD |
| Address | 5 GREENHILLS AVE MOOREBANK NSW 2170 Australia |
| Telephone | Barnes Australia +612 9793 7555 Mon-Fri 8am-4:30pm |
| Fax | Barnes Australia +612 9793 7091 |
| Website | www.barnesnz.co.nz |
| Email | sales@barnes.com.au |

Emergency telephone number


| | |
|-----------------------------------|---|
| Association / Organisation | New Zealand Poisons Information Centre |
| Emergency telephone numbers | Barnes NZ +649 9731 816 - Monday-Thursday 9am-5pm Friday 9am-4.30pm |
| Other emergency telephone numbers | New Zealand Poisons Information Centre 0800 764 766 After Hours |

SECTION 2 Hazards identification

Classification of the substance or mixture

| | |
|---|--|
| Classification [1] | Skin Corrosion/Irritation Category 2, Serious Eye Damage/Eye Irritation Category 2 |
| Legend: | 1. Classified by Chemwatch; 2. Classification drawn from CCID EPA NZ; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI |
| Determined by Chemwatch using GHS/HSNO criteria | 6.3A, 6.4A |

Label elements

| | |
|---------------------|---|
| Hazard pictogram(s) |  |
| Signal word | Warning |

Hazard statement(s)

| | |
|------|--------------------------------|
| H315 | Causes skin irritation. |
| H319 | Causes serious eye irritation. |

Precautionary statement(s) Prevention

| | |
|------|--|
| P280 | Wear protective gloves, protective clothing, eye protection and face protection. |
| P264 | Wash all exposed external body areas thoroughly after handling. |

Precautionary statement(s) Response

| | |
|-----------------------|--|
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P337+P313 | If eye irritation persists: Get medical advice/attention. |
| P302+P352 | IF ON SKIN: Wash with plenty of water. |
| P332+P313 | If skin irritation occurs: Get medical advice/attention. |
| P362+P364 | Take off contaminated clothing and wash it before reuse. |

Precautionary statement(s) Storage

Not Applicable

Precautionary statement(s) Disposal

Not Applicable

SECTION 3 Composition / information on ingredients**Substances**

See section below for composition of Mixtures

Mixtures

| CAS No | %[weight] | Name |
|----------------|---|--------------------------|
| Not Available | 60-70 | polyether polyol mixture |
| 68515-48-0 | 30-40 | diisononyl phthalate |
| 13463-67-7 | <0.6 | titanium dioxide |
| Legend: | 1. Classified by Chemwatch; 2. Classification drawn from CCID EPA NZ; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI; 4. Classification drawn from C&L; * EU IOELVs available | |

SECTION 4 First aid measures**Description of first aid measures**

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|---------------------|---|
| Eye Contact | <p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> ▶ Immediately hold eyelids apart and flush the eye continuously with running water. ▶ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. ▶ Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. ▶ Transport to hospital or doctor without delay. ▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel. |
| Skin Contact | <p>If skin contact occurs:</p> <ul style="list-style-type: none"> ▶ Immediately remove all contaminated clothing, including footwear. ▶ Flush skin and hair with running water (and soap if available). ▶ Seek medical attention in event of irritation. |
| Inhalation | Remove patient to fresh air and seek medical attention. |
| Ingestion | <ul style="list-style-type: none"> ▶ If swallowed do NOT induce vomiting. ▶ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. ▶ Observe the patient carefully. ▶ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. ▶ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. ▶ Seek medical advice. <p>If patient is unconscious, DO NOT attempt to give fluids by mouth.</p> |

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5 Firefighting measures**Extinguishing media**

- ▶ Water spray or fog.
- ▶ Alcohol stable foam.
- ▶ Dry chemical powder.
- ▶ Carbon dioxide.

Special hazards arising from the substrate or mixture

| | |
|-----------------------------|--|
| Fire Incompatibility | ▶ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result |
|-----------------------------|--|

Advice for firefighters

| | |
|----------------------|--|
| Fire Fighting | <ul style="list-style-type: none"> ▶ Alert Fire Brigade and tell them location and nature of hazard. ▶ Wear full body protective clothing with breathing apparatus. ▶ Prevent, by any means available, spillage from entering drains or water course. ▶ Use water delivered as a fine spray to control fire and cool adjacent area. ▶ Avoid spraying water onto liquid pools. ▶ DO NOT approach containers suspected to be hot. ▶ Cool fire exposed containers with water spray from a protected location. |
|----------------------|--|

| | |
|------------------------------|---|
| Fire/Explosion Hazard | <ul style="list-style-type: none"> ▶ Combustible. ▶ Slight fire hazard when exposed to heat or flame. ▶ Heating may cause expansion or decomposition leading to violent rupture of containers. ▶ On combustion, may emit toxic fumes of carbon monoxide (CO). ▶ May emit acrid smoke. ▶ Mists containing combustible materials may be explosive. <p>Combustion products include: carbon dioxide (CO₂) other pyrolysis products typical of burning organic material. May emit clouds of acrid smoke May emit poisonous fumes. May emit corrosive fumes.</p> |
|------------------------------|---|

SECTION 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

| | |
|---------------------|---|
| Minor Spills | <p>Environmental hazard - contain spillage. Slippery when spilt.</p> <ul style="list-style-type: none"> ▶ 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. |
| Major Spills | <p>Environmental hazard - contain spillage. Slippery when spilt. Moderate hazard.</p> <ul style="list-style-type: none"> ▶ 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. |

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 Handling and storage

Precautions for safe handling

| | |
|--------------------------|---|
| Safe handling | <ul style="list-style-type: none"> ▶ DO NOT allow clothing wet with material to stay in contact with skin ▶ 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. |
| Other information | <ul style="list-style-type: none"> ▶ 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. |

Conditions for safe storage, including any incompatibilities

| | |
|--------------------------------|---|
| Suitable container | ▶ Packaging as recommended by manufacturer. |
| Storage incompatibility | ▶ Avoid reaction with oxidising agents isocyanates |

SECTION 8 Exposure controls / personal protection

Control parameters

Occupational Exposure Limits (OEL)

INGREDIENT DATA


| Source | Ingredient | Material name | TWA | STEL | Peak | Notes |
|--|----------------------|----------------------|----------------------|---------------|---------------|---------------|
| New Zealand Workplace Exposure Standards (WES) | diisononyl phthalate | Diisononyl phthalate | 5 mg/m ³ | Not Available | Not Available | Not Available |
| New Zealand Workplace Exposure Standards (WES) | titanium dioxide | Titanium dioxide | 10 mg/m ³ | Not Available | Not Available | Not Available |

Emergency Limits

| Ingredient | TEEL-1 | TEEL-2 | TEEL-3 |
|------------------|----------|-----------|-------------|
| titanium dioxide | 30 mg/m3 | 330 mg/m3 | 2,000 mg/m3 |

| Ingredient | Original IDLH | Revised IDLH |
|----------------------|---------------|---------------|
| diisononyl phthalate | Not Available | Not Available |
| titanium dioxide | 5,000 mg/m3 | Not Available |

Exposure controls

| | |
|--|---|
| Appropriate engineering controls | <p>Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.</p> <p>The basic types of engineering controls are:</p> <p>Process controls which involve changing the way a job activity or process is done to reduce the risk.</p> <p>Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use.</p> <p>Employers may need to use multiple types of controls to prevent employee overexposure.</p> |
| Individual protection measures, such as personal protective equipment |  |
| Eye and face protection | <ul style="list-style-type: none"> ▶ Safety glasses with side shields. ▶ Chemical goggles. [AS/NZS 1337.1, EN166 or national equivalent] ▶ 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. |
| Skin protection | See Hand protection below |
| Hands/feet protection | <ul style="list-style-type: none"> ▶ Wear chemical protective gloves, e.g. PVC. ▶ Wear safety footwear or safety gumboots, e.g. Rubber <p>The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.</p> <p>The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.</p> <p>Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.</p> |
| Body protection | See Other protection below |
| Other protection | <ul style="list-style-type: none"> ▶ Overalls. ▶ P.V.C apron. ▶ Barrier cream. ▶ Skin cleansing cream. ▶ Eye wash unit. |

Respiratory protection

Type A-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required.

Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

| Required Minimum Protection Factor | Half-Face Respirator | Full-Face Respirator | Powered Air Respirator |
|------------------------------------|----------------------|----------------------|-------------------------|
| up to 10 x ES | A-AUS P2 | - | A-PAPR-AUS / Class 1 P2 |
| up to 50 x ES | - | A-AUS / Class 1 P2 | - |
| up to 100 x ES | - | A-2 P2 | A-PAPR-2 P2 ^ |

^ - Full-face

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO₂), G = Agricultural chemicals, K = Ammonia(NH₃), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

- ▶ Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content.
- ▶ The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate.
- ▶ Cartridge performance is affected by humidity. Cartridges should be changed after 2 hr of continuous use unless it is determined that the humidity is less than 75%, in which case, cartridges can be used for 4 hr. Used cartridges should be discarded daily, regardless of the length of time used

SECTION 9 Physical and chemical properties**Information on basic physical and chemical properties**

| | | | |
|-----------------------|---|--|---------------|
| Appearance | White liquid with slight characteristic odour; partly mixes with water. | | |
| Physical state | Liquid | Relative density (Water = 1) | 1.04 @25C |
| Odour | Not Available | Partition coefficient n-octanol / water | Not Available |

| | | | |
|---|-----------------|---|----------------|
| Odour threshold | Not Available | Auto-ignition temperature (°C) | Not Available |
| pH (as supplied) | Not Available | Decomposition temperature (°C) | Not Available |
| Melting point / freezing point (°C) | Not Applicable | Viscosity (cSt) | 863.20 @25C |
| Initial boiling point and boiling range (°C) | Not Available | Molecular weight (g/mol) | Not Applicable |
| Flash point (°C) | 182 (PMCC) | Taste | Not Available |
| Evaporation rate | Not Available | Explosive properties | Not Available |
| Flammability | Not Applicable | Oxidising properties | Not Available |
| Upper Explosive Limit (%) | Not Available | Surface Tension (dyn/cm or mN/m) | Not Available |
| Lower Explosive Limit (%) | Not Available | Volatile Component (%vol) | 0.026 |
| Vapour pressure (kPa) | Not Available | Gas group | Not Available |
| Solubility in water | Partly miscible | pH as a solution (1%) | Not Available |
| Vapour density (Air = 1) | Not Available | VOC g/L | <0.280 |

SECTION 10 Stability and reactivity

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|---|--|
| Reactivity | See section 7 |
| Chemical stability | <ul style="list-style-type: none"> ▶ Unstable in the presence of incompatible materials. ▶ Product is considered stable. ▶ Hazardous polymerisation will not occur. |
| Possibility of hazardous reactions | See section 7 |
| Conditions to avoid | See section 7 |
| Incompatible materials | See section 7 |
| Hazardous decomposition products | See section 5 |

SECTION 11 Toxicological information

Information on toxicological effects

| | |
|---------------------|---|
| Inhaled | There is some evidence to suggest that the material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage. |
| Ingestion | Accidental ingestion of the material may be damaging to the health of the individual. |
| Skin Contact | There is some evidence to suggest that this material can cause inflammation of the skin on contact in some persons. Open cuts, abraded or irritated skin should not be exposed to this material Entry into the blood-stream, through, for example, cuts, abrasions 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. |
| Eye | There is some evidence to suggest that this material can cause eye irritation and damage in some persons. |
| Chronic | Ample evidence from experiments exists that there is a suspicion this material directly reduces fertility. Based on experience with animal studies, exposure to the material may result in toxic effects to the development of the foetus, at levels which do not cause significant toxic effects to the mother. Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. There has been concern that this material can cause cancer or mutations, but there is not enough data to make an assessment. |

| | | |
|-----------------------------|---|--|
| TC891 PART B | TOXICITY | IRRITATION |
| | Not Available | Not Available |
| diisononyl phthalate | TOXICITY | IRRITATION |
| | Dermal (rabbit) LD50: >3160 mg/kg ^[2] | Not Available |
| | Inhalation(Rat) LC50: >4.4 mg/14h ^[1] | |
| | Oral (Rat) LD50: >10000 mg/kg ^[2] | |
| titanium dioxide | TOXICITY | IRRITATION |
| | dermal (hamster) LD50: >=10000 mg/kg ^[2] | Eye: no adverse effect observed (not irritating) ^[1] |
| | Inhalation(Rat) LC50: >2.28 mg/14h ^[1] | Skin (human): 0.3 mg /3D (int)-mild * |
| | Oral (Rat) LD50: >=2000 mg/kg ^[1] | Skin: no adverse effect observed (not irritating) ^[1] |
| Legend: | 1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances | |

| | |
|-----------------------------|--|
| DIISONONYL PHTHALATE | [Huls] The effects of DINP on fertility-related parameters such as reduced testosterone content and production and altered reproductive organ weights (with or without histopathologies) have been demonstrated in rats. Although quantitatively being less potent, DINP has exhibited adverse effects on the male reproductive system and sexual differentiation during development in a number of rodent studies (e.g. increased nipple retention, testicular pathology and decreased AGD/AGI in male offspring), which are components of the antiandrogenic pattern observed with diethylhexyl phthalate (DEHP) (a known reproductive toxicant). Foetal expression of genes involved in androgen synthesis such as STAR and |
|-----------------------------|--|

| | |
|------------------|--|
| | <p>Cyp11a were also reduced. There was also a report of increased gene expression levels of Insl3 (a foetal Leydig cell product critical for testis descent) that may infer the impaired testicular steroidogenesis following exposure to DINP at high doses (e.g. = 750 mg/kg bw/d). Reduced Insl3 was also reported in numerous studies with DEHP. Considering the chemical composition of DINP, which is represented as mixed phthalates with side-chains made up of 5?10% methylethylhexyl, limited evidence of the toxicological properties of transitional phthalates may be expected at high doses of DINP tested. The reduced pup weight was observed at approximately 100 mg/kg bw/d in both sexes, both in one- and two-generation reproductive studies in rats, in the absence of overt maternal toxicity. The pup weight reduction was also sustained and not considered solely related to low birth weight. In a post-natal toxicity study, reduced pup weight was also reduced at = 250 mg/kg bw/d. Therefore, this adverse effect of DINP is assessed as the most sensitive endpoint on offspring development. Overall, the available human data do not provide sufficient evidence for a causal relationship between exposure to DINP and adverse health effects in humans. There is also insufficient information to examine the mode of action of DINP on male reproductive tract development and sexual function in comparison with transitional phthalates. However, elements of the plausible mode of action for DINP effects on the male reproductive system, offspring growth and sexual differentiation are considered likely to be parallel in rats and humans if the exposure to DINP is high and within a critical window of development. Therefore, the effects observed in animal studies are regarded as relevant to a human risk assessment.</p> <p>High Molecular Weight Phthalate Esters (HMWPEs) Category</p> <p>The HMWPE group includes chemically similar substances produced from alcohols. These substances have been demonstrated to have few biological effects. They demonstrate minimal acute toxicity, with effect on the liver and kidney at high doses. They also cause reproductive and developmental toxicity, also, liver cancer. They are readily metabolised and excreted primarily via the urine. Repeated doses may cause liver and kidney damage, although the relevance to human health is questionable</p> <p>The material may produce peroxisome proliferation. Peroxisomes are single, membrane limited organelles in the cytoplasm that are found in the cells of animals, plants, fungi, and protozoa.</p> |
| TITANIUM DIOXIDE | <p>* IUCLID</p> <p>Laboratory (in vitro) and animal studies show, exposure to the material may result in a possible risk of irreversible effects, with the possibility of producing mutation.</p> <p>Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound. Main criteria for diagnosing RADS include the absence of previous airways disease in a non-atopic individual, with sudden onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. Other criteria for diagnosis of RADS include a reversible airflow pattern on lung function tests, moderate to severe bronchial hyperreactivity on methacholine challenge testing, and the lack of minimal lymphocytic inflammation, without eosinophilia. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. On the other hand, industrial bronchitis is a disorder that occurs as a result of exposure due to high concentrations of irritating substance (often particles) and is completely reversible after exposure ceases. The disorder is characterized by difficulty breathing, cough and mucus production.</p> <p>Exposure to titanium dioxide is via inhalation, swallowing or skin contact. When inhaled, it may deposit in lung tissue and lymph nodes causing dysfunction of the lungs and immune system. Absorption by the stomach and intestines depends on the size of the particle. It penetrated only the outermost layer of the skin, suggesting that healthy skin may be an effective barrier. There is no substantive data on genetic damage, though cases have been reported in experimental animals. Studies have differing conclusions on its cancer-causing potential.</p> <p>No significant acute toxicological data identified in literature search.</p> <p>The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.</p> <p>The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.</p> <p>WARNING: This substance has been classified by the IARC as Group 2B: Possibly Carcinogenic to Humans.</p> |

| | | | |
|-----------------------------------|---|--------------------------|---|
| Acute Toxicity | ✗ | Carcinogenicity | ✗ |
| Skin Irritation/Corrosion | ✓ | Reproductivity | ✗ |
| Serious Eye Damage/Irritation | ✓ | STOT - Single Exposure | ✗ |
| Respiratory or Skin sensitisation | ✗ | STOT - Repeated Exposure | ✗ |
| Mutagenicity | ✗ | Aspiration Hazard | ✗ |

Legend: ✗ – Data either not available or does not fill the criteria for classification
 ✓ – Data available to make classification

SECTION 12 Ecological information

Toxicity

| TC891 PART B | Endpoint | Test Duration (hr) | Species | Value | Source |
|--------------|---------------|--------------------|---------------|---------------|---------------|
| | Not Available | Not Available | Not Available | Not Available | Not Available |

| diisononyl phthalate | Endpoint | Test Duration (hr) | Species | Value | Source |
|----------------------|-----------|--------------------|-------------------------------|------------|--------|
| | NOEC(ECx) | 504h | Crustacea | >0.034mg/l | 1 |
| | LC50 | 96h | Fish | >0.1mg/l | 2 |
| | EC50 | 72h | Algae or other aquatic plants | >88mg/l | 2 |
| | EC50 | 96h | Algae or other aquatic plants | >2.8mg/l | 1 |
| | EC50 | 48h | Crustacea | >0.086mg/l | 1 |

| titanium dioxide | Endpoint | Test Duration (hr) | Species | Value | Source |
|------------------|-----------|--------------------|-------------------------------|---------------|--------|
| | BCF | 1008h | Fish | <1.1-9.6 | 7 |
| | LC50 | 96h | Fish | 1.85-3.06mg/l | 4 |
| | EC50 | 72h | Algae or other aquatic plants | 3.75-7.58mg/l | 4 |
| | EC50 | 48h | Crustacea | 1.9mg/l | 2 |
| | EC50 | 96h | Algae or other aquatic plants | 179.05mg/l | 2 |
| | NOEC(ECx) | 504h | Crustacea | 0.02mg/l | 4 |

Legend: Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 4. US EPA,

Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data

On the basis of available evidence concerning either toxicity, persistence, potential to accumulate and or observed environmental fate and behaviour, the material may present a danger, immediate or long-term and /or delayed, to the structure and/ or functioning of natural ecosystems.

Very toxic to aquatic organisms.

DO NOT discharge into sewer or waterways.

Persistence and degradability

| Ingredient | Persistence: Water/Soil | Persistence: Air |
|----------------------|-------------------------|------------------|
| diisononyl phthalate | HIGH | HIGH |
| titanium dioxide | HIGH | HIGH |

Bioaccumulative potential

| Ingredient | Bioaccumulation |
|----------------------|-------------------|
| diisononyl phthalate | LOW (BCF = 183.8) |
| titanium dioxide | LOW (BCF = 10) |

Mobility in soil

| Ingredient | Mobility |
|----------------------|--------------------|
| diisononyl phthalate | LOW (KOC = 467200) |
| titanium dioxide | LOW (KOC = 23.74) |

SECTION 13 Disposal considerations

Waste treatment methods

| | |
|------------------------------|---|
| Product / Packaging disposal | <ul style="list-style-type: none"> ▶ 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. ▶ Recycle wherever possible or consult manufacturer for recycling options. ▶ Consult State Land Waste Authority for disposal. ▶ Bury or incinerate residue at an approved site. ▶ Recycle containers if possible, or dispose of in an authorised landfill. |
|------------------------------|---|

Ensure that the hazardous substance is disposed in accordance with the Hazardous Substances (Disposal) Notice 2017

Disposal Requirements

Packages that have been in direct contact with the hazardous substance must be only disposed if the hazardous substance was appropriately removed and cleaned out from the package. The package must be disposed according to the manufacturer's directions taking into account the material it is made of. Packages which hazardous content have been appropriately treated and removed may be recycled.

The hazardous substance must only be disposed if it has been treated by a method that changed the characteristics or composition of the substance and it is no longer hazardous.

Only dispose to the environment if a tolerable exposure limit has been set for the substance.

Only deposit the hazardous substance into or onto a landfill or sewage facility or incinerator, where the hazardous substance can be handled and treated appropriately.

SECTION 14 Transport information

Labels Required

| | |
|------------------|----------------|
| Marine Pollutant | NO |
| HAZCHEM | Not Applicable |

Land transport (UN): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

| Product name | Group |
|----------------------|---------------|
| diisononyl phthalate | Not Available |
| titanium dioxide | Not Available |

Transport in bulk in accordance with the IGC Code

| Product name | Ship Type |
|----------------------|---------------|
| diisononyl phthalate | Not Available |
| titanium dioxide | Not Available |

SECTION 15 Regulatory information

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

This substance is to be managed using the conditions specified in an applicable Group Standard

| HSR Number | Group Standard |
|------------|--|
| HSR002521 | Animal Nutritional and Animal Care Products Group Standard 2020 |
| HSR002530 | Cleaning Products Subsidiary Hazard Group Standard 2020 |
| HSR002535 | Gases under Pressure Mixtures Subsidiary Hazard Group Standard 2020 |
| HSR002503 | Additives Process Chemicals and Raw Materials Subsidiary Hazard Group Standard 2020 |
| HSR002606 | Lubricants Lubricant Additives Coolants and Anti freeze Agents Subsidiary Hazard Group Standard 2020 |
| HSR002612 | Metal Industry Products Subsidiary Hazard Group Standard 2020 |
| HSR002624 | N.O.S. Subsidiary Hazard Group Standard 2020 |
| HSR002638 | Photographic Chemicals Subsidiary Hazard Group Standard 2020 |
| HSR002644 | Polymers Subsidiary Hazard Group Standard 2020 |
| HSR002647 | Reagent Kits Group Standard 2020 |
| HSR002648 | Refining Catalysts Group Standard 2020 |
| HSR002653 | Solvents Subsidiary Hazard Group Standard 2020 |
| HSR002670 | Surface Coatings and Colourants Subsidiary Hazard Group Standard 2020 |
| HSR002684 | Water Treatment Chemicals Subsidiary Hazard Group Standard 2020 |
| HSR100425 | Pharmaceutical Active Ingredients Group Standard 2020 |
| HSR002600 | Leather and Textile Products Subsidiary Hazard Group Standard 2020 |
| HSR002605 | Lubricants Low Hazard Group Standard 2020 |
| HSR002544 | Construction Products Subsidiary Hazard Group Standard 2020 |
| HSR002549 | Corrosion Inhibitors Subsidiary Hazard Group Standard 2020 |
| HSR002552 | Cosmetic Products Group Standard 2020 |
| HSR002558 | Dental Products Subsidiary Hazard Group Standard 2020 |
| HSR002565 | Embalming Products Subsidiary Hazard Group Standard 2020 |
| HSR002571 | Fertilisers Subsidiary Hazard Group Standard 2020 |
| HSR002573 | Fire Fighting Chemicals Group Standard 2021 |
| HSR002578 | Food Additives and Fragrance Materials Subsidiary Hazard Group Standard 2020 |
| HSR002585 | Fuel Additives Subsidiary Hazard Group Standard 2020 |
| HSR002596 | Laboratory Chemicals and Reagent Kits Group Standard 2020 |
| HSR100580 | Tattoo and Permanent Makeup Substances Group Standard 2020 |
| HSR100757 | Veterinary Medicines Limited Pack Size Finished Dose Group Standard 2020 |
| HSR100758 | Veterinary Medicines Non dispersive Closed System Application Group Standard 2020 |
| HSR100759 | Veterinary Medicines Non dispersive Open System Application Group Standard 2020 |
| HSR100592 | Agricultural Compounds Special Circumstances Group Standard 2020 |
| HSR100756 | Active Ingredients for Use in the Manufacture of Agricultural Compounds Group Standard 2020 |

Please refer to Section 8 of the SDS for any applicable tolerable exposure limit or Section 12 for environmental exposure limit.

diisononyl phthalate is found on the following regulatory lists

Chemical Footprint Project - Chemicals of High Concern List

New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals

New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data

New Zealand Inventory of Chemicals (NZIoC)

New Zealand Workplace Exposure Standards (WES)

titanium dioxide is found on the following regulatory lists

Chemical Footprint Project - Chemicals of High Concern List

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Group 2B: Possibly carcinogenic to humans

International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)

New Zealand Inventory of Chemicals (NZIoC)

New Zealand Workplace Exposure Standards (WES)

Hazardous Substance Location

Subject to the Health and Safety at Work (Hazardous Substances) Regulations 2017.

| Hazard Class | Quantities |
|----------------|----------------|
| Not Applicable | Not Applicable |

Certified Handler

Subject to Part 4 of the Health and Safety at Work (Hazardous Substances) Regulations 2017.

| Class of substance | Quantities |
|--------------------|----------------|
| Not Applicable | Not Applicable |

Refer Group Standards for further information

Maximum quantities of certain hazardous substances permitted on passenger service vehicles

Subject to Regulation 13.14 of the Health and Safety at Work (Hazardous Substances) Regulations 2017.

| Hazard Class | Gas (aggregate water capacity in mL) | Liquid (L) | Solid (kg) | Maximum quantity per package for each classification |
|----------------|--------------------------------------|----------------|----------------|--|
| Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |

Tracking Requirements

Not Applicable

National Inventory Status

| National Inventory | Status |
|---|---|
| Australia - AIIC / Australia Non-Industrial Use | Yes |
| Canada - DSL | Yes |
| Canada - NDSL | No (diisononyl phthalate) |
| China - IECSC | Yes |
| Europe - EINEC / ELINCS / NLP | Yes |
| Japan - ENCS | Yes |
| Korea - KECI | Yes |
| New Zealand - NZIoC | Yes |
| Philippines - PICCS | Yes |
| USA - TSCA | Yes |
| Taiwan - TCSI | Yes |
| Mexico - INSQ | Yes |
| Vietnam - NCI | Yes |
| Russia - FBEPH | Yes |
| Legend: | Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration. |

SECTION 16 Other information

| | |
|----------------------|------------|
| Revision Date | 16/03/2023 |
| Initial Date | 09/03/2017 |

SDS Version Summary

| Version | Date of Update | Sections Updated |
|---------|----------------|--|
| 4.1 | 23/12/2022 | Classification review due to GHS Revision change. |
| 5.1 | 16/03/2023 | Hazards identification - Classification, Identification of the substance / mixture and of the company / undertaking - Supplier Information |

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

Definitions and abbreviations

PC - TWA: Permissible Concentration-Time Weighted Average
 PC - STEL: Permissible Concentration-Short Term Exposure Limit
 IARC: International Agency for Research on Cancer
 ACGIH: American Conference of Governmental Industrial Hygienists
 STEL: Short Term Exposure Limit
 TEEL: Temporary Emergency Exposure Limit,
 IDLH: Immediately Dangerous to Life or Health Concentrations
 ES: Exposure Standard
 OSF: Odour Safety Factor
 NOAEL :No Observed Adverse Effect Level
 LOAEL: Lowest Observed Adverse Effect Level
 TLV: Threshold Limit Value
 LOD: Limit Of Detection
 OTV: Odour Threshold Value
 BCF: BioConcentration Factors
 BEI: Biological Exposure Index
 AIIC: Australian Inventory of Industrial Chemicals
 DSL: Domestic Substances List
 NDSL: Non-Domestic Substances List
 IECSC: Inventory of Existing Chemical Substance in China
 EINECS: European INventory of Existing Commercial chemical Substances
 ELINCS: European List of Notified Chemical Substances
 NLP: No-Longer Polymers
 ENCS: Existing and New Chemical Substances Inventory

KECI: Korea Existing Chemicals Inventory
NZIoC: New Zealand Inventory of Chemicals
PICCS: Philippine Inventory of Chemicals and Chemical Substances
TSCA: Toxic Substances Control Act
TCSI: Taiwan Chemical Substance Inventory
INSQ: Inventario Nacional de Sustancias Químicas
NCI: National Chemical Inventory
FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

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