

Northfork Natures Orange Pumice Hand Cleaner

ACCO Brands Australia Pty Ltd

Version No: 1.2

Safety Data Sheet according to WHS and ADG requirements

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S.GHS.AUS.EN

SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

Product Identifier

| | |
|-------------------------------|--|
| Product name | Northfork Natures Orange Pumice Hand Cleaner |
| Synonyms | Not Available |
| Other means of identification | 500ML - 637130300 5L - 637130700 15L - 637130800 |

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

| | |
|--------------------------|----------------|
| Relevant identified uses | Skin Degreaser |
|--------------------------|----------------|

Details of the supplier of the safety data sheet

| | |
|-------------------------|--|
| Registered company name | ACCO Brands Australia Pty Ltd |
| Address | 17-19 Waterloo Street, Queanbeyan 2620 NSW Australia |
| Telephone | +61-2-96740900 |
| Fax | +61-2-96740910 |
| Website | www.accobrand.com.au |
| Email | sds.anz@acco.com |

Emergency telephone number

| | |
|-----------------------------------|--------------------------|
| Association / Organisation | Poisons Information Line |
| Emergency telephone numbers | 13 11 26 |
| Other emergency telephone numbers | 13 11 26 |

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

HAZARDOUS CHEMICAL. NON-DANGEROUS GOODS. According to the WHS Regulations and the ADG Code.

| | |
|-------------------------------|---|
| Poisons Schedule | Not Applicable |
| Classification ^[1] | Skin Corrosion/Irritation Category 2, Serious Eye Damage Category 1, Acute Aquatic Hazard Category 2, Chronic Aquatic Hazard Category 2 |
| Legend: | 1. Classified by Chemwatch; 2. Classification drawn from HSIS ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI |

Label elements

| | |
|--------------------|--|
| GHS label elements | |
|--------------------|--|

| | |
|-------------|---------------|
| SIGNAL WORD | DANGER |
|-------------|---------------|

Hazard statement(s)

| | |
|------|---|
| H315 | Causes skin irritation |
| H318 | Causes serious eye damage |
| H401 | Toxic to aquatic life |
| H411 | Toxic to aquatic life with long lasting effects |

Precautionary statement(s) Prevention

| | |
|------|---|
| P101 | If medical advice is needed, have product container or label at hand. |
| P102 | Keep out of reach of children. |
| P103 | Read label before use. |

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| | |
|-------------|--|
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |
| P273 | Avoid release to the environment. |

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. |
| P310 | Immediately call a POISON CENTER or doctor/physician. |
| P362 | Take off contaminated clothing and wash before reuse. |
| P391 | Collect spillage. |
| P302+P352 | IF ON SKIN: Wash with plenty of soap and water. |
| P332+P313 | If skin irritation occurs: Get medical advice/attention. |

Precautionary statement(s) Storage

Not Applicable

Precautionary statement(s) Disposal

| | |
|-------------|---|
| P501 | Dispose of contents/container in accordance with local regulations. |
|-------------|---|

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substances

See section below for composition of Mixtures

Mixtures

| CAS No | %[weight] | Name |
|------------|-----------|---|
| 139-33-3 | <10 | <u>EDTA disodium salt</u> |
| 9007-20-9 | <10 | <u>carboxypolymethylene</u> |
| 111-76-2 | <10 | <u>ethylene glycol monobutyl ether</u> |
| 68131-39-5 | <10 | <u>alcohols C12-15 ethoxylated</u> |
| 5989-27-5 | <10 | <u>d-limonene</u> |
| 61789-91-1 | <10 | <u>jojoba oil</u> |
| 16698-35-4 | <10 | <u>beta-tocopherol</u> |
| 56-81-5 | <10 | <u>glycerol</u> |
| 6093-03-4 | <10 | <u>diphenyl phenol</u> |
| 26172-55-4 | <10 | <u>5-chloro-2-methyl-4-isothiazolin-3-one</u> |
| 26542-23-4 | <10 | <u>4,5-dichloro-2-methyl-4-isothiazolin-3-one</u> |
| 92879-30-6 | <10 | <u>(C8-10)alkyl D-glycopyranoside</u> |
| 102-71-6 | <10 | <u>triethanolamine</u> |

SECTION 4 FIRST AID MEASURES

Description of first aid measures

| | |
|---------------------|---|
| Eye Contact | <p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> ▶ Wash out immediately with fresh 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. ▶ Seek medical attention without delay; if pain persists or recurs seek medical attention. ▶ 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 | <ul style="list-style-type: none"> ▶ If fumes, aerosols or combustion products are inhaled remove from contaminated area. ▶ Other measures are usually unnecessary. |
| Ingestion | <ul style="list-style-type: none"> ▶ Immediately give a glass of water. ▶ First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor. |

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

For acute or short term repeated exposures to ethylene glycol:

- ▶ Early treatment of ingestion is important. Ensure emesis is satisfactory.
- ▶ Test and correct for metabolic acidosis and hypocalcaemia.
- ▶ Apply sustained diuresis when possible with hypertonic mannitol.
- ▶ Evaluate renal status and begin haemodialysis if indicated. [I,L,O]
- ▶ Rapid absorption is an indication that emesis or lavage is effective only in the first few hours. Cathartics and charcoal are generally not effective.
- ▶ Correct acidosis, fluid/electrolyte balance and respiratory depression in the usual manner. Systemic acidosis (below 7.2) can be treated with intravenous sodium bicarbonate solution.
- ▶ Ethanol therapy prolongs the half-life of ethylene glycol and reduces the formation of toxic metabolites.
- ▶ Pyridoxine and thiamine are cofactors for ethylene glycol metabolism and should be given (50 to 100 mg respectively) intramuscularly, four times per day for 2 days.
- ▶ Magnesium is also a cofactor and should be replenished. The status of 4-methylpyrazole, in the treatment regime, is still uncertain. For clearance of the material and its metabolites, haemodialysis is much superior to peritoneal dialysis.

[Ellenhorn and Barceloux: Medical Toxicology]

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It has been suggested that there is a need for establishing a new biological exposure limit before a workshift that is clearly below 100 mmol ethoxy-acetic acids per mole creatinine in morning urine of people occupationally exposed to ethylene glycol ethers. This arises from the finding that an increase in urinary stones may be associated with such exposures.
Laitinen J., et al: *Occupational & Environmental Medicine* 1996; 53, 595-600

SECTION 5 FIREFIGHTING MEASURES

Extinguishing media

The product contains a substantial proportion of water, therefore there are no restrictions on the type of extinguishing media which may be used. Choice of extinguishing media should take into account surrounding areas.

Though the material is non-combustible, evaporation of water from the mixture, caused by the heat of nearby fire, may produce floating layers of combustible substances.

In such an event consider:

- ▶ foam.
- ▶ dry chemical powder.
- ▶ carbon dioxide.

Special hazards arising from the substrate or mixture

| | |
|-----------------------------|-------------|
| Fire Incompatibility | None known. |
|-----------------------------|-------------|

Advice for firefighters

| | |
|------------------------------|--|
| Fire Fighting | <ul style="list-style-type: none"> ▶ Alert Fire Brigade and tell them location and nature of hazard. ▶ Wear breathing apparatus plus protective gloves in the event of a fire. ▶ Prevent, by any means available, spillage from entering drains or water courses. ▶ Use fire fighting procedures suitable for surrounding area. ▶ DO NOT approach containers suspected to be hot. ▶ Cool fire exposed containers with water spray from a protected location. ▶ If safe to do so, remove containers from path of fire. ▶ Equipment should be thoroughly decontaminated after use. |
| Fire/Explosion Hazard | <ul style="list-style-type: none"> ▶ The material is not readily combustible under normal conditions. ▶ However, it will break down under fire conditions and the organic component may burn. ▶ Not considered to be a significant fire risk. ▶ Heat may cause expansion or decomposition with violent rupture of containers. ▶ Decomposes on heating and may produce toxic fumes of carbon monoxide (CO). ▶ May emit acrid smoke. <p>Decomposes on heating and produces toxic fumes of; carbon dioxide (CO₂) other pyrolysis products typical of burning organic material. May emit poisonous fumes. May emit corrosive fumes.</p> |

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

| | |
|---------------------|---|
| Minor Spills | <p>Environmental hazard - contain spillage.</p> <ul style="list-style-type: none"> ▶ 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. 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. ▶ Stop leak if safe to do so. ▶ Contain spill with sand, earth or vermiculite. ▶ Collect recoverable product into labelled containers for recycling. |

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"> ▶ 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. ▶ DO NOT allow material to contact humans, exposed food or food utensils. ▶ Avoid contact with incompatible materials. ▶ When handling, DO NOT eat, drink or smoke. ▶ DO NOT allow clothing wet with material to stay in contact with skin |
| Other information | |

Conditions for safe storage, including any incompatibilities

| | |
|---------------------------|---|
| Suitable container | <ul style="list-style-type: none"> ▶ Polyethylene or polypropylene container. ▶ Packing as recommended by manufacturer. |
|---------------------------|---|

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| | ▶ Check all containers are clearly labelled and free from leaks. |
| Storage incompatibility | None known |

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA


| Source | Ingredient | Material name | TWA | STEL | Peak | Notes |
|------------------------------|---------------------------------|-----------------|---------------------------------|--------------------------------|---------------|---------------|
| Australia Exposure Standards | ethylene glycol monobutyl ether | 2-Butoxyethanol | 96.9 mg/m ³ / 20 ppm | 242 mg/m ³ / 50 ppm | Not Available | Sk |
| Australia Exposure Standards | glycerol | Glycerin mist | 10 mg/m ³ | Not Available | Not Available | Not Available |
| Australia Exposure Standards | triethanolamine | Triethanolamine | 5 mg/m ³ | Not Available | Not Available | Sen |

EMERGENCY LIMITS

| Ingredient | Material name | TEEL-1 | TEEL-2 | TEEL-3 |
|--|---|-----------------------|-----------------------|------------------------|
| EDTA disodium salt | Ethylenediaminetetraacetic acid, disodium salt | 11 mg/m ³ | 120 mg/m ³ | 400 mg/m ³ |
| carboxypolymethylene | Acrylic acid polymers; (Acrylic polymer or resin) | 7.5 mg/m ³ | 83 mg/m ³ | 500 mg/m ³ |
| ethylene glycol monobutyl ether | Butoxyethanol, 2-; (Glycol ether EB) | 20 ppm | 20 ppm | 700 ppm |
| d-limonene | Limonene, d- | 20 ppm | 20 ppm | 160 ppm |
| glycerol | Glycerine (mist); (Glycerol; Glycerin) | 30 mg/m ³ | 310 mg/m ³ | 2500 mg/m ³ |
| 5-chloro-2-methyl-4-isothiazolin-3-one | Chloro-2-methyl-4-isothiazolin-3-one, 5- | 0.2 mg/m ³ | 0.2 mg/m ³ | 0.2 mg/m ³ |
| triethanolamine | Triethanolamine; (Trihydroxytriethylamine) | 15 mg/m ³ | 51 mg/m ³ | 1100 mg/m ³ |

| Ingredient | Original IDLH | Revised IDLH |
|--|---------------|----------------|
| EDTA disodium salt | Not Available | Not Available |
| carboxypolymethylene | Not Available | Not Available |
| ethylene glycol monobutyl ether | 700 ppm | 700 [Unch] ppm |
| alcohols C12-15 ethoxylated | Not Available | Not Available |
| d-limonene | Not Available | Not Available |
| jojoba oil | Not Available | Not Available |
| beta-tocopherol | Not Available | Not Available |
| glycerol | Not Available | Not Available |
| diphenyl phenol | Not Available | Not Available |
| 5-chloro-2-methyl-4-isothiazolin-3-one | Not Available | Not Available |
| 4,5-dichloro-2-methyl-4-isothiazolin-3-one | Not Available | Not Available |
| (C8-10)alkyl D-glycopyranoside | Not Available | Not Available |
| triethanolamine | Not Available | 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> <p>General exhaust is adequate under normal operating conditions.</p> |
| Personal protection |  |
| Eye and face protection | <ul style="list-style-type: none"> ▶ Safety glasses with side shields. ▶ Chemical goggles. ▶ 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. |
| Skin protection | See Hand protection below |

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|------------------------------|---|
| 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>NOTE:</p> <ul style="list-style-type: none"> ▶ The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact. ▶ Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed. <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>Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include:</p> <ul style="list-style-type: none"> ▶ frequency and duration of contact, ▶ chemical resistance of glove material, ▶ glove thickness and ▶ dexterity <p>Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739, AS/NZS 2161.1 or national equivalent).</p> <ul style="list-style-type: none"> ▶ When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended. ▶ When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended. ▶ Some glove polymer types are less affected by movement and this should be taken into account when considering gloves for long-term use. |
| 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. |
| Thermal hazards | Not Available |

Recommended material(s)

GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the:

"Forsberg Clothing Performance Index".

The effect(s) of the following substance(s) are taken into account in the **computer-generated** selection:

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| Material | CPI |
|-------------------|-----|
| BUTYL | C |
| NAT+NEOPR+NITRILE | C |
| NATURAL RUBBER | C |
| NATURAL+NEOPRENE | C |
| NEOPRENE | C |
| NEOPRENE/NATURAL | C |
| NITRILE | C |
| PE/EVAL/PE | C |
| PVA | C |
| PVC | C |
| SARANEX-23 | C |
| VITON | C |

* CPI - Chemwatch Performance Index

A: Best Selection

B: Satisfactory; may degrade after 4 hours continuous immersion

C: Poor to Dangerous Choice for other than short term immersion

NOTE: As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -

* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

Respiratory protection

Type AK-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 5 x ES | AK-AUS / Class 1 P2 | - | AK-PAPR-AUS / Class 1 P2 |
| up to 25 x ES | Air-line* | AK-2 P2 | AK-PAPR-2 P2 |
| up to 50 x ES | - | AK-3 P2 | - |
| 50+ x ES | - | Air-line** | - |

^ - 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)

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| Appearance | A yellow liquid. | | |
|------------------|------------------|---|---------------|
| Physical state | Liquid | Relative density (Water = 1) | 0.98-1.02 |
| Odour | Not Available | Partition coefficient n-octanol / water | Not Available |
| Odour threshold | Not Available | Auto-ignition temperature (°C) | Not Available |
| pH (as supplied) | 6-8 | Decomposition temperature | Not Available |

Continued...

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| | | | |
|--|---------------|----------------------------------|---------------|
| Melting point / freezing point (°C) | Not Available | Viscosity (cSt) | Not Available |
| Initial boiling point and boiling range (°C) | Not Available | Molecular weight (g/mol) | Not Available |
| Flash point (°C) | Not Available | Taste | Not Available |
| Evaporation rate | Not Available | Explosive properties | Not Available |
| Flammability | Not Available | 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) | Not Available |
| Vapour pressure (kPa) | Not Available | Gas group | Not Available |
| Solubility in water (g/L) | Miscible | pH as a solution (1%) | Not Available |
| Vapour density (Air = 1) | Not Available | VOC g/L | Not Available |

SECTION 10 STABILITY AND REACTIVITY

| | |
|------------------------------------|--|
| 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 | <p>The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.</p> <p>Not normally a hazard due to non-volatile nature of product</p> <p>Workers exposed to terphenyl and its isomers are associated with ocular and respiratory tract irritation. Higher concentrations were lethal and produced both respiratory diseases and damaging effect on the system.</p> |
| Ingestion | <p>Nonionic surfactants may produce localised irritation of the oral or gastrointestinal lining and induce vomiting and mild diarrhoea.</p> <p>The material has NOT been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence.</p> <p>In a 14-day dietary study, young rats fed 0.2% of the various isomers of terphenyl showed increased plasma cholesterol, low body weight (o-, and m- isomers), liver hypertrophy (m-isomer) and adrenal hypertrophy (o-isomer).</p> |
| Skin Contact | <p>The material is not thought to produce adverse health effects or skin irritation following contact (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting.</p> <p>Topical application of terphenyl and its may produce a damaging effect on the skin (irritation, sensitisation, scarring and skin death) depending on the animal involved.</p> <p>Alkyl glycosides, as a family, are considered non-irritating to the skin.</p> <p>Open cuts, abraded or irritated skin should not be exposed to this material</p> <p>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.</p> |
| Eye | <p>This material can cause eye irritation and damage in some persons.</p> <p>Application of terphenyl to rabbit's eye can cause extreme conjunctival irritation.</p> <p>Non-ionic surfactants can cause numbing of the cornea, which masks discomfort normally caused by other agents and leads to corneal injury. Irritation varies depending on the duration of contact, the nature and concentration of the surfactant.</p> <p>At very high concentrations, alkyl polyglycosides and polygalactosides are eye irritants while some C8 alkyl glycoside solutions may produce serious eye damage.</p> |
| Chronic | <p>Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.</p> <p>There is limited evidence that, skin contact with this product is more likely to cause a sensitisation reaction in some persons compared to the general population.</p> <p>Workers repeatedly exposed to terphenyl developed non-specific readily reversible skin rash. Feeding trials in rats with un-irradiated mixtures of the isomers of terphenyl showed low body weight, reduced haemoglobin and damaging effect on the kidney.</p> <p>There has been concern that this material can cause cancer or mutations, but there is not enough data to make an assessment.</p> |

| | | |
|-----------------------|--|---------------|
| Natures Orange Pumice | TOXICITY | IRRITATION |
| | Not Available | Not Available |
| EDTA disodium salt | TOXICITY | IRRITATION |
| | Oral (rat) LD50: 2000 mg/kg ^[2] | Not Available |
| carboxypolymethylene | TOXICITY | IRRITATION |
| | Dermal (rabbit) LD50: >3000 mg/kg ^[2] | Not Available |

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| | | |
|--|---|-----------------------------------|
| | Oral (rat) LD50: >1000 mg/kg ^[2] | |
| | Oral (rat) LD50: >2500 mg/kg ^[2] | |
| | Oral (rat) LD50: 2500 mg/kg ^[2] | |
| | Oral (rat) LD50: 4100 mg/kg ^[2] | |
| ethylene glycol monobutyl ether | TOXICITY | IRRITATION |
| | dermal (rat) LD50: >2000 mg/kg ^[1] | * [Union Carbide] |
| | Inhalation (rat) LC50: 450 ppm/4H ^[2] | Eye (rabbit): 100 mg SEVERE |
| | Oral (rat) LD50: 250 mg/kg ^[2] | Eye (rabbit): 100 mg/24h-moderate |
| | | Skin (rabbit): 500 mg, open; mild |
| alcohols C12-15 ethoxylated | TOXICITY | IRRITATION |
| | Dermal (rabbit) LD50: >2000 mg/kg ^[2] | Eye: SEVERE * |
| | Oral (rat) LD50: 1600 mg/kg ^[2] | Skin: slight |
| d-limonene | TOXICITY | IRRITATION |
| | Dermal (rabbit) LD50: >5000 mg/kg ^[2] | Nil reported |
| | Oral (rat) LD50: >2000 mg/kg ^[1] | Skin (rabbit): 500mg/24h moderate |
| jojoba oil | TOXICITY | IRRITATION |
| | Not Available | Not Available |
| beta-tocopherol | TOXICITY | IRRITATION |
| | Not Available | Not Available |
| glycerol | TOXICITY | IRRITATION |
| | dermal (guinea pig) LD50: 54000 mg/kg ^[1] | Not Available |
| | Oral (rat) LD50: >20-<39800 mg/kg ^[1] | |
| diphenyl phenol | TOXICITY | IRRITATION |
| | Not Available | Not Available |
| 5-chloro-2-methyl-4-isothiazolin-3-one | TOXICITY | IRRITATION |
| | Not Available | Not Available |
| 4,5-dichloro-2-methyl-4-isothiazolin-3-one | TOXICITY | IRRITATION |
| | Not Available | Not Available |
| (C8-10)alkyl D-glycopyranoside | TOXICITY | IRRITATION |
| | Dermal (rabbit) LD50: >2000 mg/kg ^[2] | [Chubb National Foam Inc.] |
| | Oral (rat) LD50: >5000 mg/kg ^[2] | |
| triethanolamine | TOXICITY | IRRITATION |
| | dermal (rat) LD50: >18080 mg/kg ^[2] | Eye (rabbit): 0.1 ml - |
| | Oral (rat) LD50: 5559.6 mg/kg (female) ^[2] | Eye (rabbit): 10 mg - mild |
| | | Eye (rabbit): 5.62 mg - SEVERE |
| | | minor conjunctival irritation |
| | | minor iritis, |
| | | no corneal injury * |
| | | no irritation * |
| | Skin (human): 15 mg/3d (int)-mild | |
| | Skin (rabbit): 4 h occluded | |

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| | |
|----------------|--|
| | Skin (rabbit): 560 mg/24 hr- mild with significant discharge; |
| 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 |

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| Natures Orange Pumice | <p>No significant acute toxicological data identified in literature search.</p> <p>The following information refers to contact allergens as a group and may not be specific to this product.</p> <p>Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions. The significance of the contact allergen is not simply determined by its sensitisation potential: the distribution of the substance and the opportunities for contact with it are equally important. A weakly sensitising substance which is widely distributed can be a more important allergen than one with stronger sensitising potential with which few individuals come into contact. From a clinical point of view, substances are noteworthy if they produce an allergic test reaction in more than 1% of the persons tested.</p> |
| EDTA DISODIUM SALT | <p>The following information refers to contact allergens as a group and may not be specific to this product.</p> <p>Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions. The significance of the contact allergen is not simply determined by its sensitisation potential: the distribution of the substance and the opportunities for contact with it are equally important. A weakly sensitising substance which is widely distributed can be a more important allergen than one with stronger sensitising potential with which few individuals come into contact. From a clinical point of view, substances are noteworthy if they produce an allergic test reaction in more than 1% of the persons tested.</p> <p>Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS. 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. Industrial bronchitis, on the other hand, is a disorder that occurs as result of exposure due to high concentrations of irritating substance (often particulate in nature) and is completely reversible after exposure ceases. The disorder is characterised by dyspnea, cough and mucus production.</p> <p>For ethylenediaminetetraacetic acid (EDTA) and its salts:</p> <p>EDTA is a strong organic acid (approximately 1000 times stronger than acetic acid). It has a high affinity for alkaline-earth ions (for example, calcium and magnesium) and heavy-metal ions (for example, lead and mercury). This affinity generally results in the formation of highly stable and soluble hexadentate chelate complexes. EDTA's ability to complex is used commercially to either promote or inhibit chemical reactions, depending on application.</p> <p>EDTA and its salts are expected to be absorbed by the lungs and gastrointestinal tract; absorption through the skin is unlikely.</p> <p>In general, EDTA and its salts are mild skin irritants but considered severe eye irritants. The greatest risk in the human body will occur when the EDTA attempts to scavenge the trace metals used and required by the body.</p> <p>The binding of divalent and trivalent cations by EDTA can cause mineral deficiencies, which seem to be responsible for all of the known pharmacological effects.</p> |
| CARBOXPOLYMETHYLENE | <p>Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS. 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. Industrial bronchitis, on the other hand, is a disorder that occurs as result of exposure due to high concentrations of irritating substance (often particulate in nature) and is completely reversible after exposure ceases. The disorder is characterised by dyspnea, cough and mucus production.</p> <p>The material may produce severe irritation to the eye causing pronounced 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>No significant acute toxicological data identified in literature search.</p> |
| ETHYLENE GLYCOL MONOBUTYL ETHER | <p>The material may produce severe irritation to the eye causing pronounced 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>For ethylene glycol monoalkyl ethers and their acetates (EGMAEs):</p> <p>Typical members of this category are ethylene glycol propylene ether (EGPE), ethylene glycol butyl ether (EGBE) and ethylene glycol hexyl ether (EGHE) and their acetates.</p> <p>EGMAEs are substrates for alcohol dehydrogenase isozyme ADH-3, which catalyzes the conversion of their terminal alcohols to aldehydes (which are transient metabolites). Further, rapid conversion of the aldehydes by aldehyde dehydrogenase produces alkoxyacetic acids, which are the predominant urinary metabolites of mono substituted glycol ethers.</p> <p>Acute Toxicity: Oral LD50 values in rats for all category members range from 739 (EGHE) to 3089 mg/kg bw (EGPE), with values increasing with decreasing molecular weight. Four to six hour acute inhalation toxicity studies were conducted for these chemicals in rats at the highest vapour concentrations practically achievable. Values range from LC0 > 85 ppm (508 mg/m3) for EGHE, LC50 > 400ppm (2620 mg/m3) for EGBE to LC50 > 2132 ppm (9061 mg/m3) for EGPE. No lethality was observed for any of these materials under these conditions. Dermal LD50 values in rabbits range from 435 mg/kg bw (EGBE) to 1500 mg/kg bw (EGBEA).</p> <p>Exposure of pregnant rats to ethylene glycol monobutyl ether (2-butoxyethanol) at 100 ppm or rabbits at 200 ppm during organogenesis resulted in maternal toxicity and embryotoxicity including a decreased number of viable implantations per litter. Slight foetotoxicity in the form of poorly ossified or unossified skeletal elements was also apparent in rats. Teratogenic effects were not observed in other species.</p> <p>At least one researcher has stated that the reproductive effects were less than that of other monoalkyl ethers of ethylene glycol.</p> <p>Chronic exposure may cause anaemia, macrocytosis, abnormally large red cells and abnormal red cell fragility.</p> <p>Exposure of male and female rats and mice for 14 weeks to 2 years produced a regenerative haemolytic anaemia and subsequent effects on the haemopoietic system in rats and mice. In addition, 2-butoxyethanol exposures caused increases in the incidence of neoplasms and nonneoplastic lesions (1). The occurrence of the anaemia was concentration-dependent and more pronounced in rats and females.</p> <p>For ethylene glycol:</p> <p>Ethylene glycol is quickly and extensively absorbed through the gastrointestinal tract. Limited information suggests that it is also absorbed through the respiratory tract; dermal absorption is apparently slow. Following absorption, ethylene glycol is distributed throughout the body according to total body water. In most mammalian species, including humans, ethylene glycol is initially metabolised by alcohol dehydrogenase to form glycolaldehyde, which is rapidly converted to glycolic acid and glyoxal by aldehyde oxidase and aldehyde dehydrogenase. These metabolites are oxidised to glyoxylate; glyoxylate may be further metabolised to formic acid, oxalic acid, and glycine. Breakdown of both glycine and formic acid</p> |

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| | <p>can generate CO₂, which is one of the major elimination products of ethylene glycol. In addition to exhaled CO₂, ethylene glycol is eliminated in the urine as both the parent compound and glycolic acid.</p> <p>NOTE: Changes in kidney, liver, spleen and lungs are observed in animals exposed to high concentrations of this substance by all routes. ** ASCC (NZ) SDS</p> |
| ALCOHOLS C12-15 ETHOXYLATED | <p>Human beings have regular contact with alcohol ethoxylates through a variety of industrial and consumer products such as soaps, detergents, and other cleaning products. Exposure to these chemicals can occur through ingestion, inhalation, or contact with the skin or eyes. Studies of acute toxicity show that volumes well above a reasonable intake level would have to occur to produce any toxic response. Moreover, no fatal case of poisoning with alcohol ethoxylates has ever been reported. Multiple studies investigating the acute toxicity of alcohol ethoxylates have shown that the use of these compounds is of low concern in terms of oral and dermal toxicity.</p> <p>Clinical animal studies indicate these chemicals may produce gastrointestinal irritation such as ulcerations of the stomach, pilo-erection, diarrhea, and lethargy. Similarly, slight to severe irritation of the skin or eye was generated when undiluted alcohol ethoxylates were applied to the skin and eyes of rabbits and rats. The chemical shows no indication of being a genotoxin, carcinogen, or mutagen (HERA 2007).</p> <p>Both laboratory and animal testing has shown that there is no evidence for alcohol ethoxylates (AEs) causing genetic damage, mutations or cancer. No adverse reproductive or developmental effects were observed.</p> <p>The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.</p> <p>for Tergitol 25-L-9: Neodol 25-9 Neodol 25-7 *Shell Canada ** Huntsman (for Teric 12A9)</p> |
| D-LIMONENE | <p>The following information refers to contact allergens as a group and may not be specific to this product.</p> <p>Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions. The significance of the contact allergen is not simply determined by its sensitisation potential: the distribution of the substance and the opportunities for contact with it are equally important. A weakly sensitising substance which is widely distributed can be a more important allergen than one with stronger sensitising potential with which few individuals come into contact. From a clinical point of view, substances are noteworthy if they produce an allergic test reaction in more than 1% of the persons tested.</p> <p>d-Limonene is readily absorbed by inhalation and ingestion. Dermal absorption is reported to be lower than by the inhalation route. d-Limonene is rapidly distributed to different tissues in the body, readily metabolised and eliminated primarily through the urine.</p> <p>Limonene exhibits low acute toxicity by all three routes in animals. Limonene is a skin irritant in both experimental animals and humans. Limited data are available on the potential to cause eye and respiratory irritation. Autooxidised products of d-limonene have the potential to be skin sensitisers. Limited data are available in humans on the potential to cause respiratory sensitisation.</p> <p>The substance is classified by IARC as Group 3: NOT classifiable as to its carcinogenicity to humans.</p> <p>Evidence of carcinogenicity may be inadequate or limited in animal testing.</p> <p>Tumorigenic by RTECS criteria</p> |
| JOJOBA OIL | <p>Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS. 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. Industrial bronchitis, on the other hand, is a disorder that occurs as result of exposure due to high concentrations of irritating substance (often particulate in nature) and is completely reversible after exposure ceases. The disorder is characterised by dyspnea, cough and mucus production.</p> <p>No significant acute toxicological data identified in literature search.</p> <p>Group A aliphatic monoesters (fatty acid esters) cause very little or no injury and are considered safe for use in cosmetics.</p> |
| BETA-TOCOPHEROL | No significant acute toxicological data identified in literature search. |
| GLYCEROL | <p>Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS. 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. Industrial bronchitis, on the other hand, is a disorder that occurs as result of exposure due to high concentrations of irritating substance (often particulate in nature) and is completely reversible after exposure ceases. The disorder is characterised by dyspnea, cough and mucus production.</p> <p>At very high concentrations, evidence predicts that glycerol may cause tremor, irritation of the skin, eyes, digestive tract and airway. Otherwise it is of low toxicity. There is no significant evidence to suggest that it causes cancer, genetic, reproductive or developmental toxicity.</p> |
| DIPHENYL PHENOL | <p>Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS. 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. Industrial bronchitis, on the other hand, is a disorder that occurs as result of exposure due to high concentrations of irritating substance (often particulate in nature) and is completely reversible after exposure ceases. The disorder is characterised by dyspnea, cough and mucus production.</p> <p>The following information refers to contact allergens as a group and may not be specific to this product.</p> <p>Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions. The significance of the contact allergen is not simply determined by its sensitisation potential: the distribution of the substance and the opportunities for contact with it are equally important. A weakly sensitising substance which is widely distributed can be a more important allergen than one with stronger sensitising potential with which few individuals come into contact. From a clinical point of view, substances are noteworthy if they produce an allergic test reaction in more than 1% of the persons tested.</p> <p>No significant acute toxicological data identified in literature search.</p> |
| 5-CHLORO-2-METHYL-4-ISOTHIAZOLIN-3-ONE | <p>The following information refers to contact allergens as a group and may not be specific to this product.</p> <p>Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions. The significance of the contact allergen is not simply determined by its sensitisation potential: the distribution of the substance and the opportunities for contact with it are equally important. A weakly sensitising substance which is widely distributed can be a more important allergen than one with stronger sensitising potential with which few individuals come into contact. From a clinical point of view, substances are noteworthy if they produce an allergic test reaction in more than 1% of the persons tested.</p> <p>No significant acute toxicological data identified in literature search.</p> <p>The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce</p> |

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| | <p>conjunctivitis. 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>Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS. 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. Industrial bronchitis, on the other hand, is a disorder that occurs as result of exposure due to high concentrations of irritating substance (often particulate in nature) and is completely reversible after exposure ceases. The disorder is characterised by dyspnea, cough and mucus production.</p> <p>NOTE: Substance has been shown to be mutagenic in at least one assay, or belongs to a family of chemicals producing damage or change to cellular DNA. Considered to be the major sensitizer in Kathon CG (1) (1). Bruze et al - Contact Dermatitis 20: 219-39, 1989</p> |
| <p>4,5-DICHLORO-2-METHYL-4-ISOTHIAZOLIN-3-ONE</p> | <p>The following information refers to contact allergens as a group and may not be specific to this product. Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions. The significance of the contact allergen is not simply determined by its sensitisation potential: the distribution of the substance and the opportunities for contact with it are equally important. A weakly sensitising substance which is widely distributed can be a more important allergen than one with stronger sensitising potential with which few individuals come into contact. From a clinical point of view, substances are noteworthy if they produce an allergic test reaction in more than 1% of the persons tested.</p> <p>No significant acute toxicological data identified in literature search.</p> <p>The material may be irritating to the eye, with prolonged contact causing 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>Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS. 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. Industrial bronchitis, on the other hand, is a disorder that occurs as result of exposure due to high concentrations of irritating substance (often particulate in nature) and is completely reversible after exposure ceases. The disorder is characterised by dyspnea, cough and mucus production.</p> |
| <p>(C8-10)ALKYL D-GLYCOPYRANOSIDE</p> | <p>No significant acute toxicological data identified in literature search.</p> <p>At very high concentrations, alkyl glycosides are considered irritant, with the risk of serious damage to the eyes. However, it does not irritate the skin.</p> <p>The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.</p> <p>for (C9-11)alkyl D-glycopyranoside</p> |
| <p>TRIETHANOLAMINE</p> | <p>The following information refers to contact allergens as a group and may not be specific to this product. Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions. The significance of the contact allergen is not simply determined by its sensitisation potential: the distribution of the substance and the opportunities for contact with it are equally important. A weakly sensitising substance which is widely distributed can be a more important allergen than one with stronger sensitising potential with which few individuals come into contact. From a clinical point of view, substances are noteworthy if they produce an allergic test reaction in more than 1% of the persons tested.</p> <p>Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS. 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. Industrial bronchitis, on the other hand, is a disorder that occurs as result of exposure due to high concentrations of irritating substance (often particulate in nature) and is completely reversible after exposure ceases. The disorder is characterised by dyspnea, cough and mucus production.</p> <p>While it is difficult to generalise about the full range of potential health effects posed by exposure to the many different amine compounds, characterised by those used in the manufacture of polyurethane and polyisocyanurate foams, it is agreed that overexposure to the majority of these materials may cause adverse health effects.</p> <ul style="list-style-type: none"> ▶ Many amine-based compounds can induce histamine liberation, which, in turn, can trigger allergic and other physiological effects, including bronchoconstriction or bronchial asthma and rhinitis. ▶ Systemic symptoms include headache, nausea, faintness, anxiety, a decrease in blood pressure, tachycardia (rapid heartbeat), itching, erythema (reddening of the skin), urticaria (hives), and facial edema (swelling). Systemic effects (those affecting the body) that are related to the pharmacological action of amines are usually transient. <p>Typically, there are four routes of possible or potential exposure: inhalation, skin contact, eye contact, and ingestion.</p> <p>Inhalation: Inhalation of vapors may, depending upon the physical and chemical properties of the specific product and the degree and length of exposure, result in moderate to severe irritation of the tissues of the nose and throat and can irritate the lungs. Products with higher vapour pressures have a greater potential for higher airborne concentrations. This increases the probability of worker exposure. The material may produce severe irritation to the eye causing pronounced 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>Studies done show that triethanolamine is of low toxicity following high dose exposure by swallowing, skin contact or inhalation. It has not been shown to cause cancer, genetic defects, reproductive or developmental toxicity.</p> <p>The substance is classified by IARC as Group 3: NOT classifiable as to its carcinogenicity to humans.</p> <p>Evidence of carcinogenicity may be inadequate or limited in animal testing.</p> <p>NOTE: Substance has been shown to be mutagenic in at least one assay, or belongs to a family of chemicals producing damage or change to cellular DNA. Lachrymation, diarrhoea, convulsions, urinary tract changes, changes in bladder weight, changes in testicular weight, changes in thymus weight, changes in liver weight, dermatitis after systemic exposure, kidney, ureter, bladder tumours recorded. Equivocal tumourigen by RTECS criteria. Dermal rabbit value quoted above is for occluded patch in male or female animals * Union Carbide</p> |

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| 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 available but does not fill the criteria for classification
✔ – Data required to make classification available
☐ – Data Not Available to make classification

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

| Ingredient | Endpoint | Test Duration (hr) | Species | Value | Source |
|--|----------|--------------------|-------------------------------|----------------|--------|
| EDTA disodium salt | LC50 | 96 | Fish | 41mg/L | 2 |
| EDTA disodium salt | EC50 | 48 | Crustacea | 140mg/L | 2 |
| EDTA disodium salt | EC50 | 72 | Algae or other aquatic plants | 2.77mg/L | 2 |
| EDTA disodium salt | EC50 | 72 | Algae or other aquatic plants | >60mg/L | 2 |
| EDTA disodium salt | NOEC | 72 | Algae or other aquatic plants | 0.39mg/L | 2 |
| carboxypolymethylene | EC50 | 384 | Crustacea | 389.869mg/L | 3 |
| carboxypolymethylene | EC50 | 96 | Algae or other aquatic plants | 8596.446mg/L | 3 |
| carboxypolymethylene | LC50 | 96 | Fish | 1684.686mg/L | 3 |
| ethylene glycol monobutyl ether | EC50 | 384 | Crustacea | 51.539mg/L | 3 |
| ethylene glycol monobutyl ether | LC50 | 96 | Fish | 222.042mg/L | 3 |
| ethylene glycol monobutyl ether | EC50 | 48 | Crustacea | 164mg/L | 2 |
| ethylene glycol monobutyl ether | NOEC | 168 | Crustacea | 56mg/L | 2 |
| ethylene glycol monobutyl ether | EC50 | 96 | Algae or other aquatic plants | 720mg/L | 2 |
| alcohols C12-15 ethoxylated | LC50 | 96 | Fish | 0.59mg/L | 2 |
| alcohols C12-15 ethoxylated | EC50 | 48 | Crustacea | 0.13mg/L | 2 |
| alcohols C12-15 ethoxylated | EC50 | 48 | Crustacea | 0.14mg/L | 2 |
| alcohols C12-15 ethoxylated | NOEC | 48 | Crustacea | 0.056mg/L | 2 |
| alcohols C12-15 ethoxylated | EC50 | 72 | Algae or other aquatic plants | 0.3mg/L | 2 |
| d-limonene | EC50 | 384 | Crustacea | 0.051mg/L | 3 |
| d-limonene | EC50 | 96 | Algae or other aquatic plants | 0.212mg/L | 3 |
| d-limonene | LC50 | 96 | Fish | 0.199mg/L | 3 |
| d-limonene | EC50 | 48 | Crustacea | 0.36mg/L | 2 |
| d-limonene | NOEC | 48 | Crustacea | 0.074mg/L | 2 |
| glycerol | EC0 | 24 | Crustacea | >500mg/L | 1 |
| glycerol | EC50 | 96 | Algae or other aquatic plants | 77712.039mg/L | 3 |
| glycerol | LC50 | 96 | Fish | >11 mg/L | 2 |
| diphenyl phenol | EC50 | 48 | Crustacea | 0.159mg/L | 2 |
| diphenyl phenol | EC50 | 48 | Crustacea | 8.48mg/L | 2 |
| 5-chloro-2-methyl-4-isothiazolin-3-one | EC50 | 120 | Algae or other aquatic plants | 0.022mg/L | 4 |
| 5-chloro-2-methyl-4-isothiazolin-3-one | EC50 | 48 | Crustacea | 0.028mg/L | 4 |
| 5-chloro-2-methyl-4-isothiazolin-3-one | EC50 | 72 | Algae or other aquatic plants | 0.021mg/L | 4 |
| 5-chloro-2-methyl-4-isothiazolin-3-one | LC50 | 96 | Fish | 0.19mg/L | 4 |
| 5-chloro-2-methyl-4-isothiazolin-3-one | NOEC | 504 | Crustacea | 0.172mg/L | 1 |
| triethanolamine | LC50 | 96 | Fish | 0.0011807mg/L | 4 |
| triethanolamine | EC10 | 96 | Algae or other aquatic plants | 7.1mg/L | 1 |
| triethanolamine | EC50 | 48 | Crustacea | 609.88mg/L | 2 |
| triethanolamine | NOEC | 504 | Crustacea | 16mg/L | 2 |
| triethanolamine | EC50 | 72 | Algae or other aquatic plants | >107- <260mg/L | 2 |

Continued...

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Legend:

Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 - Aquatic Toxicity Data (Estimated) 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

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.

Wastes resulting from use of the product must be disposed of on site or at approved waste sites.

For Mixed Terphenyls and Quaterphenyls:

Environmental Fate: Environmental fate of these substances is expected to be focused primarily in the soil and sediment compartments.

Terrestrial Fate: These chemicals are expected to extensively degrade. Half-lives in soil range between 8-12 weeks. Mixed terphenyls and quaterphenyls are solid and waxy at room temperature and possess exceedingly low vapor pressures. Waxiness increases as vapor pressure decreases and molecular weight increases.

Aquatic Fate: All water solubility values for mixed terphenyls, its isomeric components and the quaterphenyls, establish this category of chemicals as possessing very low water solubility. None of these chemicals are readily hydrolysable; all have exceedingly low water solubility characteristics, and would be expected to undergo limited photolysis in the environment.

Ecotoxicity: Mixed terphenyls biodegrade slowly in the environment and are slightly toxic to *Daphnia magna* water fleas, rainbow trout and fathead minnow.

For Alkyl Polyglycosides (APGs): APG and fatty acid glucose amides (FAGAs) are non-ionic surfactants used in household products such as cleaning agents, liquid dishwashing agents and liquid detergents.

Environmental Fate: Several studies have shown that APGs with a linear alkyl chain are ultimately biodegradable in the absence of molecular oxygen and occurs rapidly. Branched C8 APGs were only partially degraded in low oxygen conditions in contrast to the extensive anaerobic degradation of linear APGs. The effects of APG structure on the aerobic degradation pathway have not been described. The pathways by which FAGAs biodegrade are not yet known. APGs with alkyl chain lengths from C8 to C16 are readily biodegradable. The primary biodegradation of APGs is rapid and ultimate biodegradation without formation of stable metabolites has been confirmed. Complete mineralization without an accumulation of any metabolites has also been demonstrated.

DO NOT discharge into sewer or waterways.

Persistence and degradability

| Ingredient | Persistence: Water/Soil | Persistence: Air |
|--|---------------------------|-----------------------------|
| EDTA disodium salt | LOW | LOW |
| carboxypolymethylene | LOW | LOW |
| ethylene glycol monobutyl ether | LOW (Half-life = 56 days) | LOW (Half-life = 1.37 days) |
| d-limonene | HIGH | HIGH |
| glycerol | LOW | LOW |
| 5-chloro-2-methyl-4-isothiazolin-3-one | HIGH | HIGH |
| triethanolamine | LOW | LOW |

Bioaccumulative potential

| Ingredient | Bioaccumulation |
|--|------------------------|
| EDTA disodium salt | LOW (LogKOW = -3.8573) |
| carboxypolymethylene | LOW (LogKOW = 0.4415) |
| ethylene glycol monobutyl ether | LOW (BCF = 2.51) |
| d-limonene | HIGH (LogKOW = 4.8275) |
| glycerol | LOW (LogKOW = -1.76) |
| 5-chloro-2-methyl-4-isothiazolin-3-one | LOW (LogKOW = 0.0444) |
| triethanolamine | LOW (BCF = 3.9) |

Mobility in soil

| Ingredient | Mobility |
|--|--------------------|
| EDTA disodium salt | LOW (KOC = 1046) |
| carboxypolymethylene | HIGH (KOC = 1.201) |
| ethylene glycol monobutyl ether | HIGH (KOC = 1) |
| d-limonene | LOW (KOC = 1324) |
| glycerol | HIGH (KOC = 1) |
| 5-chloro-2-methyl-4-isothiazolin-3-one | LOW (KOC = 45.15) |
| triethanolamine | LOW (KOC = 10) |

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods


| | |
|-------------------------------------|--|
| Product / Packaging disposal | <p>Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.</p> <p>A Hierarchy of Controls seems to be common - the user should investigate:</p> <ul style="list-style-type: none"> ▶ Reduction ▶ Reuse ▶ Recycling ▶ Disposal (if all else fails) <p>This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. If it has been contaminated, it may be possible to reclaim the product by filtration, distillation or some other means. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate.</p> <ul style="list-style-type: none"> ▶ DO NOT allow wash water from cleaning or process equipment to enter drains. |
|-------------------------------------|--|

Natures Orange Pumice

- ▶ 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.
- ▶ Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.
- ▶ Dispose of by: burial in a land-fill specifically licenced to accept chemical and / or pharmaceutical wastes or incineration in a licenced apparatus (after admixture with suitable combustible material).
- ▶ Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.

SECTION 14 TRANSPORT INFORMATION

Labels Required

| | |
|-------------------------|---|
| Marine Pollutant |  |
| HAZCHEM | Not Applicable |

Land transport (ADG): 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

SECTION 15 REGULATORY INFORMATION

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

EDTA DISODIUM SALT(139-33-3) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Inventory of Chemical Substances (AICS)

CARBOXPOLYMETHYLENE(9007-20-9) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Inventory of Chemical Substances (AICS)

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

ETHYLENE GLYCOL MONOBUTYL ETHER(111-76-2) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards

Australia Hazardous Substances Information System - Consolidated Lists

Australia Inventory of Chemical Substances (AICS)

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

ALCOHOLS C12-15 ETHOXYLATED(68131-39-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Hazardous Substances Information System - Consolidated Lists

Australia Inventory of Chemical Substances (AICS)

D-LIMONENE(5989-27-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Hazardous Substances Information System - Consolidated Lists

Australia Inventory of Chemical Substances (AICS)

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

JOJOBA OIL(61789-91-1) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Inventory of Chemical Substances (AICS)

BETA-TOCOPHEROL(16698-35-4) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Inventory of Chemical Substances (AICS)

GLYCEROL(56-81-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards

Australia Inventory of Chemical Substances (AICS)

DIPHENYL PHENOL(6093-03-4) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Inventory of Chemical Substances (AICS)

5-CHLORO-2-METHYL-4-ISOTHIAZOLIN-3-ONE(26172-55-4) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Inventory of Chemical Substances (AICS)

4,5-DICHLORO-2-METHYL-4-ISOTHIAZOLIN-3-ONE(26542-23-4) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Inventory of Chemical Substances (AICS)

(C8-10)ALKYL D-GLYCOPYRANOSIDE(92879-30-6) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Inventory of Chemical Substances (AICS)

TRIETHANOLAMINE(102-71-6) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards

Australia Hazardous Substances Information System - Consolidated Lists

Australia Inventory of Chemical Substances (AICS)

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

Natures Orange Pumice

| National Inventory | Status |
|-------------------------------|---|
| Australia - AICS | Y |
| Canada - DSL | N (4,5-dichloro-2-methyl-4-isothiazolin-3-one; (C8-10)alkyl D-glycopyranoside; diphenyl phenol) |
| Canada - NDSL | N (EDTA disodium salt; 4,5-dichloro-2-methyl-4-isothiazolin-3-one; 5-chloro-2-methyl-4-isothiazolin-3-one; beta-tocopherol; glycerol; triethanolamine; (C8-10)alkyl D-glycopyranoside; d-limonene; carboxypolymethylene; alcohols C12-15 ethoxylated; diphenyl phenol; ethylene glycol monobutyl ether; jojoba oil) |
| China - IECSC | N (4,5-dichloro-2-methyl-4-isothiazolin-3-one; diphenyl phenol) |
| Europe - EINEC / ELINCS / NLP | N (4,5-dichloro-2-methyl-4-isothiazolin-3-one; carboxypolymethylene) |
| Japan - ENCS | N (4,5-dichloro-2-methyl-4-isothiazolin-3-one; (C8-10)alkyl D-glycopyranoside; alcohols C12-15 ethoxylated; diphenyl phenol; jojoba oil) |
| Korea - KECI | N (4,5-dichloro-2-methyl-4-isothiazolin-3-one; (C8-10)alkyl D-glycopyranoside; diphenyl phenol; jojoba oil) |
| New Zealand - NZIoC | N (4,5-dichloro-2-methyl-4-isothiazolin-3-one; diphenyl phenol) |
| Philippines - PICCS | N (4,5-dichloro-2-methyl-4-isothiazolin-3-one; (C8-10)alkyl D-glycopyranoside) |
| USA - TSCA | N (4,5-dichloro-2-methyl-4-isothiazolin-3-one; (C8-10)alkyl D-glycopyranoside; diphenyl phenol) |
| Legend: | Y = All ingredients are on the inventory N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets) |

SECTION 16 OTHER INFORMATION

Other information

Ingredients with multiple cas numbers

| Name | CAS No |
|--------------------------------|--|
| EDTA disodium salt | 139-33-3, 69772-70-9 |
| carboxypolymethylene | 54182-57-9, 76050-42-5, 9003-01-4, 9007-16-3, 9007-17-4, 9007-20-9, 9062-04-8 |
| d-limonene | 138-86-3, 5989-27-5 |
| jojoba oil | 61789-91-1, 90045-98-0 |
| beta-tocopherol | 1406-66-2, 148-03-8, 16698-35-4 |
| glycerol | 29796-42-7, 30049-52-6, 37228-54-9, 56-81-5, 75398-78-6, 78630-16-7, 8013-25-0 |
| diphenyl phenol | 2432-11-3, 6093-03-4 |
| (C8-10)alkyl D-glycopyranoside | 161074-97-1, 92879-30-6 |

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.

A list of reference resources used to assist the committee may be found at:

www.chemwatch.net

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
 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

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