

ICP Construction

Version No: **3.3** Safety Data Sheet according to OSHA HazCom Standard (2012) requirements

SECTION 1 IDENTIFICATION

Relevant identified uses

Product Identifier

| Product name | Acr. Pool Paint F240XX Series |
|---|-------------------------------|
| Synonyms | Not Available |
| Other means of identification | Not Available |
| Recommended use of the chemical and restrictions on use | |

New and previously finished concrete, gunite, fiberglass, polyester, bituminous and aluminum swimming pools that are to be filled with fresh or salt water.

Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

| Registered company name | ICP Construction | |
|-------------------------|---|--|
| Address | 50 Dascomb Road Massachusetts Andover United States | |
| Telephone | 978-623-9980 | |
| Fax | Not Available | |
| Website | Not Available | |
| Email | Not Available | |
| | | |

Emergency phone number

| • • • • | |
|-----------------------------------|----------------|
| Association / Organisation | Chemtel |
| Emergency telephone numbers | 1-800-255-3924 |
| Other emergency telephone numbers | 1-813-248-0585 |

SECTION 2 HAZARD(S) IDENTIFICATION

| ance or mixture | |
|---|--|
| Acute Toxicity (Oral) Category 4, Skin Corrosion/Irritation Category 2, Skin Sensitizer Category 1, Eye Irritation Category 2A, Acute Aquatic Hazard Category 3 | |
| | |
| | |
| WARNING | |
| | |
| | |
| Harmful if swallowed. | |
| Causes skin irritation. | |
| May cause an allergic skin reaction. | |
| Causes serious eye irritation. | |
| Harmful to aquatic life | |
| | |

Hazard(s) not otherwise specified

Not Applicable

Precautionary statement(s) Prevention

P280

Wear protective gloves/protective clothing/eye protection/face protection.

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| P261 | Avoid breathing mist/vapours/spray. | |
|------|---|--|
| P270 | Do not eat, drink or smoke when using this product. | |

Precautionary statement(s) Response

| P362 | Take off contaminated clothing and wash before reuse. | |
|----------------|--|--|
| P302+P352 | IF ON SKIN: Wash with plenty of soap and water. | |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. | |
| | | |

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 |
|------------|-----------|--|
| 13463-67-7 | 10-30 | titanium dioxide |
| 107-21-1 | 1-5 | ethylene glycol |
| 57-55-6 | 1-5 | propylene glycol |
| 1308-38-9 | 10-30 | C.I. Pigment Green 17 |
| 1309-37-1 | 10-30 | red iron oxide |
| 26172-55-4 | 0.1-1 | 5-chloro-2-methyl-4-isothiazolin-3-one |

SECTION 4 FIRST-AID MEASURES

Description of first aid measures

| • | |
|--------------|---|
| Eye Contact | If this product comes in contact with the eyes: 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 | If skin contact occurs: 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 | If fumes or combustion products are inhaled remove from contaminated area. Lay patient down. Keep warm and rested. Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. Transport to hospital, or doctor. |
| Ingestion | IF SWALLOWED, REFER FOR MEDICAL ATTENTION, WHERE POSSIBLE, WITHOUT DELAY. For advice, contact a Poisons Information Centre or a doctor. Urgent hospital treatment is likely to be needed. In the mean time, qualified first-aid personnel should treat the patient following observation and employing supportive measures as indicated by the patient's condition. If the services of a medical officer or medical doctor are readily available, the patient should be placed in his/her care and a copy of the SDS should be provided. Further action will be the responsibility of the medical specialist. If medical attention is not available on the worksite or surroundings send the patient to a hospital together with a copy of the SDS. Where medical attention is not immediately available or where the patient is more than 15 minutes from a hospital or unless instructed otherwise: INDUCE vomiting with fingers down the back of the throat, ONLY IF CONSCIOUS. Lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. NOTE: Wear a protective glove when inducing vomiting by mechanical means. |

Most important symptoms and effects, both acute and delayed

See Section 11

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]

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

For acute or short term repeated exposures to iron and its derivatives:

- Always treat symptoms rather than history.
- In general, however, toxic doses exceed 20 mg/kg of ingested material (as elemental iron) with lethal doses exceeding 180 mg/kg.
- + Control of iron stores depend on variation in absorption rather than excretion. Absorption occurs through aspiration, ingestion and burned skin.
- Hepatic damage may progress to failure with hypoprothrombinaemia and hypoglycaemia. Hepatorenal syndrome may occur.
- F Iron intoxication may also result in decreased cardiac output and increased cardiac pooling which subsequently produces hypotension.
- Serum iron should be analysed in symptomatic patients. Serum iron levels (2-4 hrs post-ingestion) greater that 100 ug/dL indicate poisoning with levels, in excess of 350 ug/dL, being potentially serious. Emesis or lavage (for obtunded patients with no gag reflex) are the usual means of decontamination.
- Activated charcoal does not effectively bind iron.
- Catharsis (using sodium sulfate or magnesium sulfate) may only be used if the patient already has diarrhoea.
- Deferoxamine is a specific chelator of ferric (3+) iron and is currently the antidote of choice. It should be administered parenterally. [Ellenhorn and Barceloux: Medical Toxicology]

SECTION 5 FIRE-FIGHTING MEASURES

Extinguishing media

Foam.

- Dry chemical powder.
- BCF (where regulations permit).

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 |
|----------------------|--|
|----------------------|--|

Special protective equipment and precautions for fire-fighters

| Fire Fighting | 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. | |
|-----------------------|--|--|
| Fire/Explosion Hazard | Combustible. Slight fire hazard when exposed to heat or flame. Heating may cause expansion or decomposition leading to violent rupture of containers. Combustion products include: , carbon dioxide (CO2) , other pyrolysis products typical of burning organic material. May emit poisonous fumes. May emit corrosive fumes. | |

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 | Remove all ignition sources. Clean up all spills immediately. Avoid breathing vapours and contact with skin and eyes. |
|--------------|---|
| Major Spills | Absorb or contain isothiazolinone liquid spills with sand, earth, inert material or vermiculite. The absorbent (and surface soil to a depth sufficient to remove all of the biocide) should be shovelled into a drum and treated with an 11% solution of sodium metabisulfite (Na2S2O5) or sodium bisulfite (NaHSO3), or 12% sodium sulfite (Na2SO3) and 8% hydrochloric acid (HCI). Glutathione has also been used to inactivate the isothiazolinones. |

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

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

| Safe handling | Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. DO NOT allow clothing wet with material to stay in contact with skin |
|-------------------|---|
| Other information | Store in original containers. Keep containers securely sealed. No smoking, naked lights or ignition sources. |

Conditions for safe storage, including any incompatibilities

| Suitable container | Metal can or drum Packaging as recommended by manufacturer. Check all containers are clearly labelled and free from leaks. |
|-------------------------|---|
| Storage incompatibility | For iron oxide (ferric oxide): Avoid storage with aluminium, calcium hypochlorite and ethylene oxide. Risk of explosion occurs following reaction with powdered aluminium, calcium silicide, ethylene oxide (polymerises), carbon monoxide, magnesium and perchlorates. Risk of ignition or formation of flammable gases or vapours occurs following reaction with carbides, for example caesium carbide, (produces heat), hydrogen sulfide, hydrogen peroxide (decomposes). Titanium dioxide reacts with strong acids, strong oxidisers reacts violently with aluminium, calcium, hydrazine, lithium (at around 200 deg C.), magnesium, potassium, sodium, zinc, especially at elevated temperatures these reactions involves reduction of the oxide and are accompanied by incandescence dust or powders can ignite and then explode in a carbon dioxide atmosphere WARNING: Avoid or control reaction with peroxides. All <i>transition metal</i> peroxides should be considered as potentially explosive. For example transition metal complexes of alkyl hydroperoxides may decompose explosively. Avoid storage with reducing agents. |

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

C.I. Pigment Green 17

red iron oxide

5-chloro-2-methyl-

4-isothiazolin-3-one

N.E. mg/m3 / N.E. ppm

N.E. mg/m3 / N.E. ppm

Not Available

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA

| Source | Ingredient | Material name | TWA | STEL | | Peak | Notes |
|---|--|--|------------------|----------------|-------|------------------|-------------------------------|
| US OSHA Permissible Exposure Levels (PELs) - Table Z1 | titanium dioxide | Titanium dioxide | 15 mg/m3 | Not Availat | ble | Not Available | Total dust |
| US ACGIH Threshold Limit Values (TLV) | titanium dioxide | Titanium dioxide | 10 mg/m3 | Not Availat | ole | Not Available | TLV® Basis: LRT irr |
| US NIOSH Recommended Exposure Limits (RELs) | titanium dioxide | Rutile, Titanium oxide, Titanium peroxide | Not Available | Not Availat | ole | Not Available | Ca See Appendix A |
| US ACGIH Threshold Limit Values (TLV) | ethylene glycol | ‡ Ethylene glycol | Not Available | Not Availat | ole | 100 mg/m3 | TLV® Basis: URT & eye irr |
| US NIOSH Recommended Exposure Limits (RELs) | ethylene glycol | 1,2-Dihydroxyethane; 1,2-Ethanediol; Glycol; Glycol alcohol; Monoethylene glycol | Not Available | Not Availat | ole | Not Available | See Appendix D |
| US OSHA Permissible Exposure Levels (PELs) - Table Z1 | C.I. Pigment Green 17 | Chromium (III) compounds | 0.5 mg/m3 | Not Availat | ble | Not Available | (as Cr) |
| US OSHA Permissible Exposure Levels (PELs) - Table Z1 | C.I. Pigment Green 17 | Chromium metal and insol. salts | 1 mg/m3 | Not Availat | ble | Not Available | (as Cr) |
| US NIOSH Recommended Exposure Limits (RELs) | C.I. Pigment Green 17 | Synonyms vary depending upon the specific Chromium(III) compound. [Note: Chromium(III) compounds include soluble chromic salts.] | 0.5 mg/m3 | Not Availat | ble | Not Available | See Appendix C |
| US OSHA Permissible Exposure Levels (PELs) - Table Z1 | red iron oxide | Iron oxide fume | 10 mg/m3 | Not Availat | ble | Not Available | Not Available |
| US ACGIH Threshold Limit Values (TLV) | red iron oxide | Iron oxide (Fe203) | 5 mg/m3 | Not Availat | ble | Not Available | TLV® Basis: Pneumoconiosis |
| US NIOSH Recommended Exposure Limits (RELs) | red iron oxide | Iron(III)oxide, Iron oxide red, Red iron oxide, Red oxide / Ferric oxide, Iron(III) oxide | 5 mg/m3 | Not Availat | ole | Not Available | See Appendix D |
| EMERGENCY LIMITS | | | | | | | |
| Ingredient | Material name | | TEEL-1 | | TEE | L-2 | TEEL-3 |
| titanium dioxide | Titanium oxide; (Ti | itanium dioxide) | 30 mg/m3 | | 330 r | ng/m3 | 2,000 mg/m3 |
| ethylene glycol | Ethylene glycol | | 30 ppm | | 40 pp | m | 60 ppm |
| propylene glycol | Propylene glycol; | Propylene glycol; (1,2-Propanediol) | | | 1,300 |) mg/m3 | 7,900 mg/m3 |
| C.I. Pigment Green 17 | Chromic oxide; (Chromium(III) oxide; Chromium sesquioxide) | | 2.2 mg/m3 | | 24 m | g/m3 | 140 mg/m3 |
| red iron oxide | Iron oxide; (Ferric oxide) | | 15 mg/m3 | | 360 r | ng/m3 | 2,200 mg/m3 |
| 5-chloro-2-methyl- 4-isothiazolin-3-one | Chloro-2-methyl-4-isothiazolin-3-one, 5- | | 0.6 mg/m3 | | 6.6 n | ng/m3 | 40 mg/m3 |
| Ingredient | Original IDLH | | Revise | d IDLH | | | |
| titanium dioxide | N.E. mg/m3 / N.E. ppm | | 5,000 ma/m3 | | | | |
| ethylene glycol | Not Available | | Not Ava | ilable | | | |
| propylene glycol | Not Available | | Not Ava | ilable | | | |

25 mg/m3

2,500 mg/m3

Not Available

Acr. Pool Paint F240XX Series

| Exposure controls | |
|-------------------------------------|--|
| Appropriate engineering controls | 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. The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the risk. |
| Personal protection | |
| Eye and face protection | Safety glasses with side shields. Chemical goggles. Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. |
| Skin protection | See Hand protection below |
| Hands/feet protection | Wear chemical protective gloves, e.g. PVC. Wear safety footwear or safety gumboots, e.g. Rubber NOTE: 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. 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. 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. Butyl rubber gloves Nitrile rubber gloves |
| Body protection | See Other protection below |
| Other protection | Overalls. P.V.C. apron. |
| Thermal hazards | Not Available |

Respiratory protection

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.

Selection of the Class and Type of respirator will depend upon the level of breathing zone contaminant and the chemical nature of the contaminant. Protection Factors (defined as the ratio of contaminant outside and inside the mask) may also be important.

| Required minimum protection factor | Maximum gas/vapour concentration present in air p.p.m. (by volume) | Half-face Respirator | Full-Face Respirator |
|------------------------------------|--|----------------------|----------------------|
| up to 10 | 1000 | A-AUS / Class 1 | - |
| up to 50 | 1000 | - | A-AUS / Class 1 |
| up to 50 | 5000 | Airline * | - |
| up to 100 | 5000 | - | A-2 |
| up to 100 | 10000 | - | A-3 |
| 100+ | | - | Airline** |

* - Continuous Flow

** - Continuous-flow or positive pressure demand.

A(All classes) = Organic vapours, B AUS or B1 = Acid gases, 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 deg C)

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| Appearance | Text | | |
|---|---------------|--|---------------|
| | | | |
| Physical state | Liquid | Relative density (Water = 1) | Not Available |
| Odour | Not Available | Partition coefficient n-octanol / water | Not Available |
| Odour threshold | Not Available | Auto-ignition temperature (°C) | Not Available |
| pH (as supplied) | 8.5 | Decomposition temperature | Not Available |
| 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) | Immiscible | 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 | 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 | Inhalation of vapours or aerosols (mists, fumes), generated by the material during the course of normal handling, may be harmful. The material is not thought to produce respiratory irritation (as classified by EC Directives using animal models). Nevertheless inhalation of vapours, fumes or aerosols, especially for prolonged periods, may produce respiratory discomfort and occasionally, distress. |
|--------------|--|
| Ingestion | Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual. Taken by mouth, isothiazolinones have moderate to high toxicity. The major signs of toxicity are severe stomach irritation, lethargy, and inco-ordination. Dusts of titanium and titanium compounds are thought to exhibit little or no toxic effects. |
| Skin Contact | There is some evidence to suggest that this material can cause inflammation of the skin on contact in some persons. Solutions of isothiazolinones may be irritating or even damaging to the skin, depending on concentration. A concentration of over 0.1% can irritate, and over 0.5% can cause severe irritation. 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. Solutions containing isothiazolinones may damage the mucous membranes and comea. Animal testing showed very low concentrations (under 0.1%) did not cause irritation, while higher levels (3-5.5%) produced severe irritation and damage to the eye. |
| Chronic | Studies show that inhaling this substance for over a long period (e.g. in an occupational setting) may increase the risk of cancer. Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population. Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. Chromium (III) is an essential trace mineral. Chronic exposure to chromium (III) irritates the airways, malnourishes the liver and kidneys, causes fluid in the lungs, and adverse effects on white blood cells, and also increases the risk of developing lung cancer. The isothiazolinones are known contact sensitisers. Sensitisation is more likely with the chlorinated species as opposed to the non-chlorinated species. There has been concern that this material can cause cancer or mutations, but there is not enough data to make an assessment. Long term exposure to titanium and several of its compounds produces lung scarring and chronic bronchitis. Breathing is impaired and cardiac changes with right heart enlargements occur. |

| Acr. Pool Paint F240XX Series | TOXICITY | IRRITATION |
|----------------------------------|--|---------------------------------------|
| | Not Available | Not Available |
| | ΤΟΧΙΟΙΤΥ | IRRITATION |
| | Inhalation (rat) LC50: >2.28 mg/l/4hr ^[1] | Skin (human): 0.3 mg /3D (int)-mild * |
| | Inhalation (rat) LC50: >3.56 mg/l/4hr ^[1] | |
| titanium dioxide | Inhalation (rat) LC50: >6.82 mg/l/4hr ^[1] | |
| | Inhalation (rat) LC50: 3.43 mg/l/4hr ^[1] | |
| | Inhalation (rat) LC50: 5.09 mg/l/4hr ^[1] | |
| | Oral (rat) LD50: >2000 mg/kg ^[1] | |
| | тохісіту | IRRITATION |
| | Dermal (rabbit) LD50: 9530 mg/kg ^[2] | Eye (rabbit): 100 mg/1h - mild |
| othulono ducol | Inhalation (rat) LC50: 50.1 mg/L/8 hr ^[2] | Eye (rabbit): 12 mg/m3/3D |
| etnyiene giycol | Oral (rat) LD50: 4700 mg/kg ^[2] | Eye (rabbit): 1440mg/6h-moderate |
| | | Eye (rabbit): 500 mg/24h - mild |
| | | Skin (rabbit): 555 mg(open)-mild |

| | TOXICITY | IRRITATION | | |
|-----------------------|---|------------------------------------|--|--|
| | Dermal (rabbit) LD50: >2000 mg/kg ^[1] | Eye (rabbit): 100 mg - mild | | |
| propylene glycol | Oral (rat) LD50: 20000 mg/kg ^[2] | Eye (rabbit): 500 mg/24h - mild | | |
| | | Skin(human):104 mg/3d Intermit Mod | | |
| | | Skin(human):500 mg/7days mild | | |
| | ТОХІСІТҮ | IRRITATION | | |
| C.I. Pigment Green 17 | Oral (rat) LD50: >5000 mg/kg ^[1] | Not Available | | |
| | ΤΟΧΙΟΙΤΥ | IRRITATION | | |
| red iron oxide | Oral (rat) LD50: >5,000 mg/kg ^[2] | Eye (rabbit): non-irritant | | |
| | | Skin (rabbit): non-irritant 24h | | |
| 5-chloro-2-methyl- | ΤΟΧΙΟΙΤΥ | IRRITATION | | |
| 4-isothiazolin-3-one | Not Available | Not Available | | |
| Legend: | I. 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 | | | |
| | | | | |
| TITANIUM DIOXIDE | The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. 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. | | | |
| | WARNING: This substance has been classified by the IARC as Group 2B: Possibly Carcinogenic to Humans. * IUCLID | | | |

| ETHYLENE GLYCOL | For ethylene glycol: 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. [Estimated Lethal Dose (human) 100 ml; RTECS quoted by Orica] Substance is reproductive effector in rats (birth defects). Mutagenic to rat cells. | | | | |
|--|--|--------------------------|---|--|--|
| PROPYLENE GLYCOL | The acute oral toxicity of propylene glycol is very low, and large quantities are required to cause perceptible health damage in humans. Serious toxicity generally occurs only at plasma concentrations over 1 g/L, which requires extremely high intake over a relatively short period of time. It would be nearly impossible to reach toxic levels by consuming foods or supplements, which contain at most 1 g/kg of PG. | | | | |
| C.I. PIGMENT GREEN 17 | On skin and inhalation exposure, chromium and its compounds (except hexavalent) can be a potent sensitiser, as particulates. Studies show that they have a complex toxicity mechanism with hexavalent chromium associated with an increased risk of lung damage and respiratory cancers (primarily bronchogenic and nose cancers). However, there is no evidence that elemental, divalent, or trivalent chromium compounds causes cancer or genetic toxicity. The substance is classified by IARC as Group 3: NOT classifiable as to its carcinogenicity to humans. Evidence of carcinogenicity may be inadequate or limited in animal testing. Substance has been investigated as a mutagen in bacteria and rodents and a tumorigen by intraperitoneal, intrapleural and intratracheal administration to rats. | | | | |
| 5-CHLORO-2-METHYL- 4-ISOTHIAZOLIN-3-ONE | No significant acute toxicological data identified in literature search. The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. 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. 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 sensitiser in Kathon CG (1) (1). Bruze etal - Contact Dermatitis 20: 219-39, 1989 | | | | |
| TITANIUM DIOXIDE & PROPYLENE GLYCOL & 5-CHLORO-2-METHYL- 4-ISOTHIAZOLIN-3-ONE | 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. | | | | |
| C.I. PIGMENT GREEN 17 & 5-CHLORO-2-METHYL- 4-ISOTHIAZOLIN-3-ONE | 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. | | | | |
| Acute Toxicity | ✓ | Carcinogenicity | 0 | | |
| Skin Irritation/Corrosion | · · | Reproductivity | 0 | | |
| Serious Eye Damage/Irritation | ✓ | STOT - Single Exposure | 0 | | |
| Respiratory or Skin sensitisation | * | STOT - Repeated Exposure | 0 | | |
| Mutagenicity | 0 | Aspiration Hazard | 0 | | |
| | | Legend: 🗙 | – Data available but does not fill the criteria for classification – Data available to make classification | | |

🚫 – Data Not Available to make classification

SECTION 12 ECOLOGICAL INFORMATION

| Toxicity | | | | | |
|------------|----------|--------------------|---------|-------|--------|
| Ingredient | Endpoint | Test Duration (hr) | Species | Value | Source |
| | | | | | |

| titanium dioxide | LC50 | 96 | Fish | 9.214mg/L | 3 |
|--|------|----------------|-------------------------------|----------------|---|
| titanium dioxide | EC50 | 48 | Crustacea | >10mg/L | 2 |
| titanium dioxide | EC50 | 72 | Algae or other aquatic plants | 5.83mg/L | 4 |
| titanium dioxide | EC20 | 72 | Algae or other aquatic plants | 1.81mg/L | 4 |
| titanium dioxide | NOEC | 336 | Fish | 0.089mg/L | 4 |
| ethylene glycol | LC50 | 96 | Fish | 2284.940mg/L | 3 |
| ethylene glycol | EC50 | 48 | Crustacea | 5046.29mg/L | 5 |
| ethylene glycol | EC50 | 96 | Algae or other aquatic plants | 6500-13000mg/L | 1 |
| ethylene glycol | EC50 | Not Applicable | Crustacea | =10mg/L | 1 |
| ethylene glycol | NOEC | 552 | Crustacea | >=1000mg/L | 2 |
| propylene glycol | LC50 | 96 | Fish | 710mg/L | 4 |
| propylene glycol | EC50 | 48 | Crustacea | >1000mg/L | 4 |
| propylene glycol | EC50 | 96 | Algae or other aquatic plants | 10905.921mg/L | 3 |
| propylene glycol | EC50 | 384 | Crustacea | 311.145mg/L | 3 |
| propylene glycol | NOEC | 168 | Fish | 98mg/L | 4 |
| C.I. Pigment Green 17 | LC50 | 96 | Fish | >0.001mg/L | 2 |
| C.I. Pigment Green 17 | EC50 | 72 | Algae or other aquatic plants | >0.1481mg/L | 2 |
| C.I. Pigment Green 17 | EC50 | 504 | Crustacea | >0.0144mg/L | 2 |
| C.I. Pigment Green 17 | NOEC | 96 | Fish | 0.001mg/L | 2 |
| red iron oxide | LC50 | 96 | Fish | 0.05mg/L | 2 |
| red iron oxide | EC50 | 72 | Algae or other aquatic plants | 18mg/L | 2 |
| red iron oxide | EC50 | 504 | Crustacea | 4.49mg/L | 2 |
| red iron oxide | NOEC | 504 | Fish | 0.52mg/L | 2 |
| 5-chloro-2-methyl- 4-isothiazolin-3-one | LC50 | 96 | Fish | 0.19mg/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 | EC50 | 120 | Algae or other aquatic plants | 0.022mg/L | 4 |
| 5-chloro-2-methyl- 4-isothiazolin-3-one | NOEC | 504 | Crustacea | 0.172mg/L | 1 |

```
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

Harmful to aquatic organisms.

For Organic Pigments:

Environmental Fate: Organic pigments are highly persistent in natural environments.

Atmospheric Fate: The chemical processes underlying breakdown of organic pigments through light or atmospheric conditions are difficult to clarify. Atmospheric contaminants, such as peroxides, which appear as the products of radiation, frequently start the degradation process.

For Chromium: Chromium is poorly absorbed by cells found in microorganisms, plants and animals. Hexavalent chromate anions are readily transported into cells and toxicity is closely linked to the higher oxidation state.

Ecotoxicity - Toxicity in Aquatic Organisms: Chromium is harmful to aquatic organisms in very low concentrations. For chromium:

Aquatic Fate - Most chromium released into water will be deposited in the sediment. A small percentage of chromium can be found in soluble and insoluble forms with soluble chromium making up a very small percentage of the total chromium. Most of the soluble chromium is present as chromium (VI) and soluble chromium (III) complexes.

Environmental Fate: Isothiazolinones are antimicrobials used to control bacteria, fungi, and for wood preservation and antifouling agents. They are frequently used in personal care products such as shampoos and other hair care products, as well as certain paint formulations. The most common isothiazolinone combinations are 5-chloro-2-methyl-4-isothiazolin-3-one, (CMI), and 2-methyl-4-isothiazolin-3-one, (MI).

DO NOT discharge into sewer or waterways

Persistence and degradability

| Ingredient | Persistence: Water/Soil | Persistence: Air |
|--|---------------------------|-----------------------------|
| titanium dioxide | HIGH | HIGH |
| ethylene glycol | LOW (Half-life = 24 days) | LOW (Half-life = 3.46 days) |
| propylene glycol | LOW | LOW |
| 5-chloro-2-methyl- 4-isothiazolin-3-one | HIGH | HIGH |

Bioaccumulative potential

| Ingredient | Bioaccumulation |
|------------------|-----------------|
| titanium dioxide | LOW (BCF = 10) |
| ethylene glycol | LOW (BCF = 200) |
| propylene glycol | LOW (BCF = 1) |

| 5-chloro-2-methyl- 4-isothiazolin-3-one | LOW (LogKOW = 0.0444) |
|--|-----------------------|
| Mobility in soil | |
| Ingredient | Mobility |
| titanium dioxide | LOW (KOC = 23.74) |
| ethylene glycol | HIGH (KOC = 1) |
| propylene glycol | HIGH (KOC = 1) |
| 5-chloro-2-methyl- 4-isothiazolin-3-one | LOW (KOC = 45.15) |

SECTION 13 DISPOSAL CONSIDERATIONS

| Waste treatment methods | |
|---------------------------------|---|
| Product / Packaging disposal | Containers may still present a chemical hazard/ danger when empty. Return to supplier for reuse/ recycling if possible. Otherwise: If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill. 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. 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. Recycle wherever possible or consult manufacturer for recycling options. Consult State Land Waste Authority for disposal. Bury or incinerate residue at an approved site. |

SECTION 14 TRANSPORT INFORMATION

Labels Required

Marine Pollutant NO

Land transport (DOT): 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

TITANIUM DIOXIDE(13463-67-7) IS FOUND ON THE FOLLOWING REGULATORY LISTS

| International Agency for Research on Cancer (IARC) - Agents Classified by the IARC | US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants |
|--|---|
| Monographs | US - Vermont Permissible Exposure Limits Table Z-1-A Final Rule Limits for Air Contaminants |
| US - Alaska Limits for Air Contaminants | US - Vermont Permissible Exposure Limits Table Z-1-A Transitional Limits for Air |
| US - California Permissible Exposure Limits for Chemical Contaminants | Contaminants |
| US - California Proposition 65 - Carcinogens | US - Washington Permissible exposure limits of air contaminants |
| US - Hawaii Air Contaminant Limits | US - Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants |
| US - Idaho - Limits for Air Contaminants | US ACGIH Threshold Limit Values (TLV) |
| US - Massachusetts - Right To Know Listed Chemicals | US ACGIH Threshold Limit Values (TLV) - Carcinogens |
| US - Michigan Exposure Limits for Air Contaminants | US NIOSH Recommended Exposure Limits (RELs) |
| US - Minnesota Permissible Exposure Limits (PELs) | US OSHA Permissible Exposure Levels (PELs) - Table Z1 |
| US - Oregon Permissible Exposure Limits (Z-1) | US Priority List for the Development of Proposition 65 Safe Harbor Levels - No Significant Risk |
| US - Pennsylvania - Hazardous Substance List | Levels (NSRLs) for Carcinogens and Maximum Allowable Dose Levels (MADLs) for |
| US - Rhode Island Hazardous Substance List | Chemicals Causing Reproductive Toxicity |
| | US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory |

ETHYLENE GLYCOL(107-21-1) IS FOUND ON THE FOLLOWING REGULATORY LISTS

| US - Alaska Limits for Air Contaminants | US - Vermont Permissible Exposure Limits Table Z-1-A Transitional Limits for Air |
|--|--|
| US - California OEHHA/ARB - Chronic Reference Exposure Levels and Target Organs | Contaminants |
| (CRELs) | US - Washington Permissible exposure limits of air contaminants |
| US - California Permissible Exposure Limits for Chemical Contaminants | US - Washington Toxic air pollutants and their ASIL, SQER and de minimis emission values |
| US - California Proposition 65 - Reproductive Toxicity | US ACGIH Threshold Limit Values (TLV) |
| US - Hawaii Air Contaminant Limits | US ACGIH Threshold Limit Values (TLV) - Carcinogens |
| US - Massachusetts - Right To Know Listed Chemicals | US ACGIH Threshold Limit Values (TLV) - Notice of Intended Changes |
| US - Michigan Exposure Limits for Air Contaminants | US ATSDR Minimal Risk Levels for Hazardous Substances (MRLs) |
| US - Minnesota Permissible Exposure Limits (PELs) | US Clean Air Act - Hazardous Air Pollutants |
| US - Oregon Permissible Exposure Limits (2-1) | US EPCRA Section 313 Chemical List |
| US - Pennsylvania - Hazardous Substance List | US NIOSH Recommended Exposure Limits (RELs) |
| US - Rhode Island Hazardous Substance List | US Spacecraft Maximum Allowable Concentrations (SMACs) for Airborne Contaminants |
| US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants | US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory |
| US - Vermont Permissible Exposure Limits Table Z-1-A Final Rule Limits for Air Contaminants | |
| PROPYLENE GLYCOL(57-55-6) IS FOUND ON THE FOLLOWING REGULATORY LISTS | |
| US - Pennsylvania - Hazardous Substance List | US ATSDR Minimal Risk Levels for Hazardous Substances (MRLs) |
| US - Rhode Island Hazardous Substance List | US Spacecraft Maximum Allowable Concentrations (SMACs) for Airborne Contaminants |
| US - Washington Toxic air pollutants and their ASIL, SQER and de minimis emission values | US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory |
| US AIHA Workplace Environmental Exposure Levels (WEELs) | |
| | _ |
| C.I. PIGMENT GREEN 17(1308-38-9) IS FOUND ON THE FOLLOWING REGULATORY LIST | 5 |
| International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs | US - Vermont Permissible Exposure Limits Table Z-1-A Transitional Limits for Air Contaminants |
| US - Alaska Limits for Air Contaminants | US - Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants |
| US - California Permissible Exposure Limits for Chemical Contaminants | US ATSDR Minimal Risk Levels for Hazardous Substances (MRLs) |
| US - Hawaii Air Contaminant Limits | US Clean Air Act - Hazardous Air Pollutants |
| US - Idaho - Limits for Air Contaminants | US CWA (Clean Water Act) - Priority Pollutants |
| US - Massachusetts - Right To Know Listed Chemicals | US CWA (Clean Water Act) - Toxic Pollutants |
| US - Michigan Exposure Limits for Air Contaminants | US EPA Carcinogens Listing |
| US - Minnesota Permissible Exposure Limits (PELs) | US EPCRA Section 313 Chemical List |
| US - Oregon Permissible Exposure Limits (Z-1) | US NIOSH Recommended Exposure Limits (RELs) |
| US - Rhode Island Hazardous Substance List | US OSHA Permissible Exposure Levels (PELs) - Table Z1 |
| US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants | US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory |
| US - Vermont Permissible Exposure Limits Table Z-1-A Final Rule Limits for Air Contaminants | |
| | |
| RED IRON OXIDE(1309-37-1) IS FOUND ON THE FOLLOWING REGULATORY LISTS | |
| International Agency for Research on Cancer (IARC) - Agents Classified by the IARC | US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants |
| Monographs | US - Vermont Permissible Exposure Limits Table Z-1-A Final Rule Limits for Air Contaminants |
| US - Alaska Limits for Air Contaminants | US - Vermont Permissible Exposure Limits Table Z-1-A Transitional Limits for Air |
| US - California Permissible Exposure Limits for Chemical Contaminants | Contaminants |
| US - Hawaii Air Contaminant Limits | US - Washington Permissible exposure limits of air contaminants |
| US - Idaho - Limits for Air Contaminants | US - Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants |
| US - Massachusetts - Right To Know Listed Chemicals | US ACGIH Threshold Limit Values (TLV) |
| US - Michigan Exposure Limits for Air Contaminants | US ACGIH I hreshold Limit Values (TLV) - Carcinogens |
| US - Minnesota Permissible Exposure Limits (PELs) | US NIOSH Recommended Exposure Limits (RELs) |
| US - Oregon Permissible Exposure Limits (Z-1) | US OSHA Permissible Exposure Levels (PELs) - Table Z1 |
| US - Pennsylvania - Hazardous Substance List | US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory |
| US - Khode Island Hazardous Substance List | |
| 5-CHLORO-2-METHYL-4-ISOTHIAZOLIN-3-ONE(26172-55-4) IS FOUND ON THE FOLLOW | VING REGULATORY LISTS |
| US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory | US TSCA Section 5(a)(2) - Significant New Lise Rules (SNI IRs) |
| or toxic outstances control Act (100A) - Onemical outstance inventory | |

Federal Regulations

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SECTION 311/312 HAZARD CATEGORIES

| Immediate (acute) health hazard | Yes |
|---------------------------------|-----|
| Delayed (chronic) health hazard | No |
| Fire hazard | No |
| Pressure hazard | No |
| Reactivity hazard | No |
| | |

US. EPA CERCLA HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES (40 CFR 302.4)

| Name | Reportable Quantity in Pounds (lb) | Reportable Quantity in kg |
|-----------------|------------------------------------|---------------------------|
| Ethylene glycol | 5000 | 2270 |

State Regulations

US. CALIFORNIA PROPOSITION 65

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm

US - CALIFORNIA PREPOSITION 65 - CARCINOGENS & REPRODUCTIVE TOXICITY (CRT): LISTED SUBSTANCE

Titanium dioxide (airborne, unbound particles of respirable size), Ethylene glycol (ingested) Listed

| Australia - AICS | Y |
|----------------------------------|--|
| Canada - DSL | Y |
| Canada - NDSL | N (red iron oxide; 5-chloro-2-methyl-4-isothiazolin-3-one; propylene glycol; ethylene glycol; C.I. Pigment Green 17) |
| China - IECSC | Y |
| Europe - EINEC / ELINCS / NLP | Y |
| Japan - ENCS | Y |
| Korea - KECI | Y |
| New Zealand - NZIoC | Y |
| Philippines - PICCS | Y |
| USA - TSCA | Y |
| 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

CONTACT POINT

PLEASE NOTE THAT TITANIUM DIOXIDE IS NOT PRESENT IN CLEAR OR NEUTRAL BASES

Other information

Ingredients with multiple cas numbers

| Name | CAS No |
|-----------------------|---|
| titanium dioxide | 13463-67-7, 1317-70-0, 1317-80-2, 12188-41-9, 1309-63-3, 100292-32-8, 101239-53-6, 116788-85-3, 12000-59-8, 12701-76-7, 12767-65-6, 12789-63-8, 1344-29-2, 185323-71-1, 185828-91-5, 188357-76-8, 188357-79-1, 195740-11-5, 221548-98-7, 224963-00-2, 246178-32-5, 252962-41-7, 37230-92-5, 37230-94-7, 37230-95-8, 37230-96-9, 39320-58-6, 39360-64-0, 39379-02-7, 416845-43-7, 494848-07-6, 494848-23-6, 494851-77-3, 494851-98-8, 55068-84-3, 55068-85-4, 552316-51-5, 62338-64-1, 767341-00-4, 97929-50-5, 98084-96-9 |
| C.I. Pigment Green 17 | 1308-38-9, 68909-79-5 |
| red iron oxide | 1332-37-2, 1309-37-1 |

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.

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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. TEL (+61 3) 9572 4700.