# CRC Fire Paint Aerosol

## CRC Industries (CRC Industries New Zealand)

Chemwatch Hazard Alert Code: **4**

Chemwatch: **50-6099**
Version No: **6.1**
Safety Data Sheet according to the Health and Safety at Work (Hazardous Substances) Regulations 2017

Initial Date: **18/06/2015**
Revision Date: **17/02/2025**
Print Date: **05/10/2026**
S.GHS.NZL.EN

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

### Product Identifier

| | |
|---|---|
| **Product name** | CRC Fire Paint Aerosol |
| **Chemical Name** | Not Applicable |
| **Synonyms** | Not Available |
| **Proper shipping name** | AEROSOLS |
| **Chemical formula** | Not Applicable |
| **Other means of identification** | Not Available |

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

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|---|---|
| **Relevant identified uses** | To provide a temperature resistant coating to metal surfaces.<br>Application is by spray atomisation from a hand held aerosol pack<br>Use according to manufacturer's directions. |

### Details of the manufacturer or importer of the safety data sheet

| | |
|---|---|
| **Registered company name** | **CRC Industries (CRC Industries New Zealand)** |
| **Address** | 10 Highbrook Drive East Tamaki Auckland New Zealand |
| **Telephone** | +64 9 272 2700 |
| **Fax** | +64 9 274 9696 |
| **Website** | www.crc.co.nz |
| **Email** | - No EMAL ID NEEDED for NZ - JACK |

### Emergency telephone number

| **Association / Organisation** | **CRC Industries (CRC Industries New Zealand)** | **CHEMWATCH EMERGENCY RESPONSE (24/7)** |
|---|---|---|
| **Emergency telephone number(s)** | NZ Poisons Centre 0800 POISON (0800 764 766) | +64 800 700 112 (ID#: 50-6099) |
| **Other emergency telephone number(s)** | 111 (NZ Emergency Services) | +61 3 9573 3188 |

## SECTION 2 Hazards identification

### Classification of the substance or mixture

| | |
|---|---|
| **Classification [1]** | Aerosols, Hazard Category 1, Acute Toxicity (Oral) Category 4, Skin Corrosion/Irritation Category 2, Serious Eye Damage/Eye Irritation Category 2, Reproductive Toxicity Category 2, Specific Target Organ Toxicity - Repeated Exposure Category 2 |
| ***Legend:*** | ***1. Classified by Chemwatch; 2. Classification drawn from CCID EPA NZ; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI*** |
| **Determined by Chemwatch using GHS/HSNO criteria** | 2.1.2A, 6.1D (oral), 6.3A, 6.4A, 6.8B, 6.9B |

### Label elements

| | |
|---|---|
| **Hazard pictogram(s)** |  |

| | |
|---|---|
| **Signal word** | **Danger** |

### Hazard statement(s)

| | |
|---|---|
| **H222+H229** | Extremely flammable aerosol. Pressurized container: may burst if heated. |
| **H302** | Harmful if swallowed. |
| **H315** | Causes skin irritation. |
| **H319** | Causes serious eye irritation. |
| **H361** | Suspected of damaging fertility or the unborn child. |
| **H373** | May cause damage to organs through prolonged or repeated exposure. |

### Precautionary statement(s) Prevention

| | |
|---|---|
| **P210** | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. |
| **P211** | Do not spray on an open flame or other ignition source. |
| **P251** | Do not pierce or burn, even after use. |
| **P260** | Do not breathe mist/vapours/spray. |

### Precautionary statement(s) Response

| | |
|---|---|
| **P308+P313** | IF exposed or concerned: Get medical advice/ attention. |
| **P305+P351+P338** | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| **P314** | Get medical advice/attention if you feel unwell. |
| **P337+P313** | If eye irritation persists: Get medical advice/attention. |

### Precautionary statement(s) Storage

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|---|---|
| **P405** | Store locked up. |
| **P410+P412** | Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. |

### Precautionary statement(s) Disposal

| | |
|---|---|
| **P501** | Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation. |

No further product hazard information.

## SECTION 3 Composition / information on ingredients

### Substances

See section below for composition of Mixtures

### Mixtures

| CAS No | %[weight] | Name |
|---|---|---|
| 108-88-3 | 20-30 | toluene |
| 108-65-6 | 5-10 | propylene glycol monomethyl ether acetate, alpha-isomer |
| 67-63-0 | 5-10 | isopropanol |
| 1330-20-7 | <5 | xylene |
| Not Available | balance | Ingredients determined not to be hazardous |
| 68476-85-7. | 25-40 | LPG (liquefied petroleum gas) |

| | |
|---|---|
| ***Legend:*** | ***1. Classified by Chemwatch; 2. Classification drawn from CCID EPA NZ; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI; 4. Classification drawn from C&L; * EU IOELVs available*** |

## SECTION 4 First aid measures

### Description of first aid measures

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|---|---|
| **Eye Contact** | If aerosols come in contact with the eyes: |

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|---|---|
| | ‣ Immediately hold the eyelids apart and flush the eye continuously for at least 15 minutes with fresh running water.<br>‣ 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.<br>‣ Transport to hospital or doctor without delay.<br>‣ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel. |
| **Skin Contact** | If solids or aerosol mists are deposited upon the skin:<br>‣ Flush skin and hair with running water (and soap if available).<br>‣ Remove any adhering solids with industrial skin cleansing cream.<br>‣ **DO NOT** use solvents.<br>‣ Seek medical attention in the event of irritation. |
| **Inhalation** | If aerosols, fumes or combustion products are inhaled:<br>‣ Remove to fresh air.<br>‣ Lay patient down. Keep warm and rested.<br>‣ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.<br>‣ If breathing is shallow or has stopped, ensure clear airway and apply resuscitation, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.<br>‣ Transport to hospital, or doctor. |
| **Ingestion** | ‣ Avoid giving milk or oils.<br>‣ Avoid giving alcohol.<br>Not considered a normal route of entry.<br>‣ If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus. |

### Indication of any immediate medical attention and special treatment needed

Treat symptomatically.
To treat poisoning by the higher aliphatic alcohols (up to C7):

- Gastric lavage with copious amounts of water.
- It may be beneficial to instill 60 ml of mineral oil into the stomach.
- Oxygen and artificial respiration as needed.
- Electrolyte balance: it may be useful to start 500 ml. M/6 sodium bicarbonate intravenously but maintain a cautious and conservative attitude toward electrolyte replacement unless shock or severe acidosis threatens.
- To protect the liver, maintain carbohydrate intake by intravenous infusions of glucose.
- Haemodialysis if coma is deep and persistent. [GOSSELIN, SMITH HODGE: Clinical Toxicology of Commercial Products, Ed 5)

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BASIC TREATMENT

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- Establish a patent airway with suction where necessary.
- Watch for signs of respiratory insufficiency and assist ventilation as necessary.
- Administer oxygen by non-rebreather mask at 10 to 15 l/min.
- Monitor and treat, where necessary, for shock.
- Monitor and treat, where necessary, for pulmonary oedema.
- Anticipate and treat, where necessary, for seizures.
- **DO NOT** use emetics. Where ingestion is suspected rinse mouth and give up to 200 ml water (5 ml/kg recommended) for dilution where patient is able to swallow, has a strong gag reflex and does not drool.
- Give activated charcoal.

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ADVANCED TREATMENT

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- Consider orotracheal or nasotracheal intubation for airway control in unconscious patient or where respiratory arrest has occurred.
- Positive-pressure ventilation using a bag-valve mask might be of use.
- Monitor and treat, where necessary, for arrhythmias.
- Start an IV D5W TKO. If signs of hypovolaemia are present use lactated Ringers solution. Fluid overload might create complications.
- If the patient is hypoglycaemic (decreased or loss of consciousness, tachycardia, pallor, dilated pupils, diaphoresis and/or dextrose strip or glucometer readings below 50 mg), give 50% dextrose.
- Hypotension with signs of hypovolaemia requires the cautious administration of fluids. Fluid overload might create complications.
- Drug therapy should be considered for pulmonary oedema.
- Treat seizures with diazepam.
- Proparacaine hydrochloride should be used to assist eye irrigation.

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EMERGENCY DEPARTMENT

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- Laboratory analysis of complete blood count, serum electrolytes, BUN, creatinine, glucose, urinalysis, baseline for serum aminotransferases (ALT and AST), calcium, phosphorus and magnesium, may assist in establishing a treatment regime. Other useful analyses include anion and osmolar gaps, arterial blood gases (ABGs), chest radiographs and electrocardiograph.
- Positive end-expiratory pressure (PEEP)-assisted ventilation may be required for acute parenchymal injury or adult respiratory distress syndrome.
- Acidosis may respond to hyperventilation and bicarbonate therapy.
- Haemodialysis might be considered in patients with severe intoxication.
- Consult a toxicologist as necessary. BRONSTEIN, A.C. and CURRANCE, P.L. EMERGENCY CARE FOR HAZARDOUS MATERIALS EXPOSURE: 2nd Ed. 1994

For C8 alcohols and above.
Symptomatic and supportive therapy is advised in managing patients.

Following acute or short term repeated exposures to toluene:

- Toluene is absorbed across the alveolar barrier, the blood/air mixture being 11.2/15.6 (at 37 degrees C.) The concentration of toluene, in expired breath, is of the order of 18 ppm following sustained exposure to 100 ppm. The tissue/blood proportion is 1/3 except in adipose where the proportion is 8/10.
- Metabolism by microsomal mono-oxygenation, results in the production of hippuric acid. This may be detected in the urine in amounts between 0.5 and 2.5 g/24 hr which represents, on average 0.8 gm/gm of creatinine. The biological half-life of hippuric acid is in the order of 1-2 hours.
- Primary threat to life from ingestion and/or inhalation is respiratory failure.
- Patients should be quickly evaluated for signs of respiratory distress (eg cyanosis, tachypnoea, intercostal retraction, obtundation) and given oxygen. Patients with inadequate tidal volumes or poor arterial blood gases (pO2 <50 mm Hg or pCO2 > 50 mm Hg) should be intubated.
- Arrhythmias complicate some hydrocarbon ingestion and/or inhalation and electrocardiographic evidence of myocardial damage has been reported; intravenous lines and cardiac monitors should be established in obviously symptomatic patients. The lungs excrete inhaled solvents, so that hyperventilation improves clearance.
- A chest x-ray should be taken immediately after stabilisation of breathing and circulation to document aspiration and detect the presence of pneumothorax.
- Epinephrine (adrenaline) is not recommended for treatment of bronchospasm because of potential myocardial sensitisation to catecholamines. Inhaled cardioselective bronchodilators (e.g. Alupent, Salbutamol) are the preferred agents, with aminophylline a second choice.
- Lavage is indicated in patients who require decontamination; ensure use.

BIOLOGICAL EXPOSURE INDEX - BEI

These represent the determinants observed in specimens collected from a healthy worker exposed at the Exposure Standard (ES or TLV):

| Determinant | Index | Sampling Time | Comments |
|---|---|---|---|
| o-Cresol in urine | 0.5 mg/L | End of shift | B |
| Hippuric acid in urine | 1.6 g/g creatinine | End of shift | B, NS |
| Toluene in blood | 0.05 mg/L | Prior to last shift of workweek | |

NS: Non-specific determinant; also observed after exposure to other material

B: Background levels occur in specimens collected from subjects NOT exposed

For acute or short term repeated exposures to xylene:

- Gastro-intestinal absorption is significant with ingestions. For ingestions exceeding 1-2 ml (xylene)/kg, intubation and lavage with cuffed endotracheal tube is recommended. The use of charcoal and cathartics is equivocal.
- Pulmonary absorption is rapid with about 60-65% retained at rest.
- Primary threat to life from ingestion and/or inhalation, is respiratory failure.
- Patients should be quickly evaluated for signs of respiratory distress (e.g. cyanosis, tachypnoea, intercostal retraction, obtundation) and given oxygen. Patients with inadequate tidal volumes or poor arterial blood gases (pO2 < 50 mm Hg or pCO2 > 50 mm Hg) should be intubated.
- Arrhythmias complicate some hydrocarbon ingestion and/or inhalation and electrocardiographic evidence of myocardial injury has been reported; intravenous lines and cardiac monitors should be established in obviously symptomatic patients. The lungs excrete inhaled solvents, so that hyperventilation improves clearance.
- A chest x-ray should be taken immediately after stabilisation of breathing and circulation to document aspiration and detect the presence of pneumothorax.
- Epinephrine (adrenalin) is not recommended for treatment of bronchospasm because of potential myocardial sensitisation to catecholamines. Inhaled cardioselective bronchodilators (e.g. Alupent, Salbutamol) are the preferred agents, with aminophylline a second choice.

BIOLOGICAL EXPOSURE INDEX - BEI

These represent the determinants observed in specimens collected from a healthy worker exposed at the Exposure Standard (ES or TLV):

| Determinant | Index | Sampling Time | Comments |
|---|---|---|---|
| Methylhippu-ric acids in urine | 1.5 gm/gm creatinine | End of shift | |
| | 2 mg/min | Last 4 hrs of shift | |

## SECTION 5 Firefighting measures

### Extinguishing media

**SMALL FIRE:**

- Water spray, dry chemical or CO2

**LARGE FIRE:**

- Water spray or fog.

### Special hazards arising from the substance or mixture

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

### Advice for firefighters

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| **Fire Fighting** | ‣ Alert Fire Brigade and tell them location and nature of hazard.<br>‣ May be violently or explosively reactive.<br>‣ Wear breathing apparatus plus protective gloves.<br>‣ Prevent, by any means available, spillage from entering drains or water course. |
| **Fire/Explosion Hazard** | ‣ Liquid and vapour are highly flammable.<br>‣ Severe fire hazard when exposed to heat or flame.<br>‣ Vapour forms an explosive mixture with air.<br>‣ Severe explosion hazard, in the form of vapour, when exposed to flame or spark.<br>Combustion products include:<br>‣ carbon monoxide (CO) |

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|---|---|
| | ‣ carbon dioxide (CO2)<br>‣ other pyrolysis products typical of burning organic material.<br>**Contains low boiling substance:** Closed containers may rupture due to pressure buildup under fire conditions. |

## 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

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|---|---|
| **Minor Spills** | ‣ Clean up all spills immediately.<br>‣ Avoid breathing vapours and contact with skin and eyes.<br>‣ Wear protective clothing, impervious gloves and safety glasses.<br>‣ Shut off all possible sources of ignition and increase ventilation. |
| **Major Spills** | ‣ DO NOT exert excessive pressure on valve; DO NOTattempt to operate damaged valve.<br>‣ Clear area of personnel and move upwind.<br>‣ Alert Fire Brigade and tell them location and nature of hazard.<br>‣ May be violently or explosively reactive.<br>‣ Wear breathing apparatus plus protective gloves.<br>‣ Remove leaking cylinders to a safe place if possible.<br>‣ Release pressure under safe, controlled conditions by opening the valve. |

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

## SECTION 7 Handling and storage

### Precautions for safe handling

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|---|---|
| **Safe handling** | ‣ **DO NOT** allow clothing wet with material to stay in contact with skin<br>‣ Avoid skin contact, including inhalation.<br>‣ Wear protective clothing when risk of exposure occurs.<br>‣ Use in a well-ventilated area.<br>‣ Prevent concentration in hollows and sumps. |
| **Other information** | ‣ Store below 38 deg. C.<br>‣ Keep dry to avoid corrosion of cans. Corrosion may result in container perforation and internal pressure may eject contents of can<br>‣ Store in original containers in approved flammable liquid storage area.<br>‣ **DO NOT** store in pits, depressions, basements or areas where vapours may be trapped.<br>‣ No smoking, naked lights, heat or ignition sources.<br>‣ Keep containers securely sealed. |

### Conditions for safe storage, including any incompatibilities

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|---|---|
| **Suitable container** | ‣ Aerosol dispenser.<br>‣ Check that containers are clearly labelled. |
| **Storage incompatibility** | ‣ Avoid reaction with oxidising agents |

## SECTION 8 Exposure controls / personal protection

### Control parameters

**Occupational Exposure Limits (OEL)**

**INGREDIENT DATA**

| Source | Ingredient | Material name | TWA | STEL | Peak | Notes |
|---|---|---|---|---|---|---|
| New Zealand Workplace Exposure Standards (WES) | toluene | Toluene (Toluol) | 20 ppm / 75 mg/m3 | 377 mg/m3 / 100 ppm | Not Available | skin - Skin absorption oto - Ototoxin bio - Exposure can also be estimated by biological monitoring |
| New Zealand Workplace Exposure Standards (WES) | isopropanol | Isopropyl alcohol | 200 ppm / 491 mg/m3 | 983 mg/m3 / 400 ppm | Not Available | Not Available |
| New Zealand Workplace Exposure Standards (WES) | xylene | Dimethylbenzene | 50 ppm / 217 mg/m3 | Not Available | Not Available | Not Available |
| New Zealand Workplace Exposure Standards (WES) | LPG (liquefied petroleum gas) | LPG (Liquefied petroleum gas) | 1000 ppm / 1800 mg/m3 | Not Available | Not Available | Not Available |

## Exposure controls

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|---|---|
| **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.<br>The basic types of engineering controls are:<br>Process controls which involve changing the way a job activity or process is done to reduce the risk.<br>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. |
| **Individual protection measures, such as personal protective equipment** |  |
| **Eye and face protection** | ‣ Safety glasses with side shields.<br>‣ Chemical goggles.[AS/NZS 1337.1, EN166 or national equivalent]<br>‣ 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.<br>‣ Close fitting gas tight goggles<br>**DO NOT** wear contact lenses.<br>‣ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens 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. |
| **Skin protection** | See Hand protection below |
| **Hands/feet protection** | ‣ No special equipment needed when handling small quantities.<br>‣ OTHERWISE:<br>‣ For potentially moderate exposures:<br>‣ Wear general protective gloves, eg. light weight rubber gloves.<br>‣ For potentially heavy exposures:<br>‣ Wear chemical protective gloves, eg. PVC. and safety footwear. |
| **Body protection** | See Other protection below |
| **Other protection** | No special equipment needed when handling small quantities.<br>**OTHERWISE:**<br>‣ Overalls.<br>‣ Skin cleansing cream.<br>‣ Eyewash unit.<br>‣ The clothing worn by process operators insulated from earth may develop static charges far higher (up to 100 times) than the minimum ignition energies for various flammable gas-air mixtures. This holds true for a wide range of clothing materials including cotton.<br>‣ Avoid dangerous levels of charge by ensuring a low resistivity of the surface material worn outermost.<br>BRETHERICK: Handbook of Reactive Chemical Hazards. |

## 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:
CRC Fire Paint Aerosol

| Material | CPI |
|---|---|
| PE/EVAL/PE | A |
| BUTYL | C |
| BUTYL/NEOPRENE | C |
| CPE | C |
| HYPALON | C |
| NAT+NEOPR+NITRILE | C |
| NATURAL RUBBER | C |
| NATURAL+NEOPRENE | C |
| NEOPRENE | C |
| NEOPRENE/NATURAL | C |
| NITRILE | C |
| NITRILE+PVC | C |
| PVA | C |
| PVC | C |

## Respiratory protection

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

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required. Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

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

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

‣ Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content.
‣ The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too

| | |
|---|---|
| PVDC/PE/PVDC | C |
| SARANEX-23 | C |
| SARANEX-23 2-PLY | C |
| TEFLON | C |
| VITON | C |
| VITON/CHLOROBUTYL | C |
| VITON/NEOPRENE | 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.

high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate.
- Cartridge performance is affected by humidity. Cartridges should be changed after 2 hr of continuous use unless it is determined that the humidity is less than 75%, in which case, cartridges can be used for 4 hr. Used cartridges should be discarded daily, regardless of the length of time used
- Generally not applicable.

Aerosols, in common with most vapours/ mists, should never be used in confined spaces without adequate ventilation. Aerosols, containing agents designed to enhance or mask smell, have triggered allergic reactions in predisposed individuals.

## SECTION 9 Physical and chemical properties

### Information on basic physical and chemical properties

| | |
|---|---|
| **Appearance** | Black flammable liquid with a characteristic odour; not miscible with water.<br>Supplied as an aerosol pack. Contents under **PRESSURE**. Contains highly flammable hydrocarbon propellant. |

| | | | |
|---|---|---|---|
| **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)** | Not Available | **Decomposition temperature (°C)** | Not Available |
| **Melting point / freezing point (°C)** | Not Available | **Viscosity (mm2/s)** | Not Available |
| **Initial boiling point and boiling range (°C)** | Not Available | **Molecular weight (g/mol)** | Not Applicable |
| **Flash point (°C)** | -81 (propellant) | **Taste** | Not Available |
| **Evaporation rate** | Not Available | **Explosive properties** | Not Available |
| **Flammability** | HIGHLY FLAMMABLE. | **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** | Not Available | **pH as a solution (1%)** | Not Available |
| **Vapour density (Air = 1)** | Not Available | **VOC g/L** | Not Available |
| **Heat of Combustion (kJ/g)** | Not Available | **Ignition Distance (cm)** | Not Available |
| **Flame Height (cm)** | Not Available | **Flame Duration (s)** | Not Available |
| **Enclosed Space Ignition Time Equivalent (s/m3)** | Not Available | **Enclosed Space Ignition Deflagration Density (g/m3)** | Not Available |

## SECTION 10 Stability and reactivity

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|---|---|
| **Reactivity** | See section 7 |
| **Chemical stability** | - Elevated temperatures.<br>- Presence of open flame.<br>- Product is considered stable.<br>- Hazardous polymerisation will not occur.<br>- Presence of heat source<br>- Presence of an ignition source |
| **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

| | |
|---|---|
| **a) Acute Toxicity** | There is sufficient evidence to classify this material as acutely toxic. |
| **b) Skin Irritation/Corrosion** | There is sufficient evidence to classify this material as skin corrosive or irritating. |
| **c) Serious Eye Damage/Irritation** | There is sufficient evidence to classify this material as eye damaging or irritating |
| **d) Respiratory or Skin sensitisation** | Based on available data, the classification criteria are not met. |
| **e) Mutagenicity** | Based on available data, the classification criteria are not met. |
| **f) Carcinogenicity** | Based on available data, the classification criteria are not met. |
| **g) Reproductivity** | There is sufficient evidence to classify this material as toxic to reproductivity |
| **h) STOT - Single Exposure** | Based on available data, the classification criteria are not met. |
| **i) STOT - Repeated Exposure** | There is sufficient evidence to classify this material as toxic to specific organs through repeated exposure |
| **j) Aspiration Hazard** | Based on available data, the classification criteria are not met. |

| | |
|---|---|
| **Inhaled** | Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by sleepiness, reduced alertness, loss of reflexes, lack of co-ordination, and vertigo.<br>Inhalation of aerosols (mists, fumes), generated by the material during the course of normal handling, may be damaging to the health of the individual.<br>There is some evidence to suggest that the material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage.<br>Inhalation of toxic gases may cause:<br>‣ Central Nervous System effects including depression, headache, confusion, dizziness, stupor, coma and seizures;<br>‣ respiratory: acute lung swellings, shortness of breath, wheezing, rapid breathing, other symptoms and respiratory arrest;<br>‣ heart: collapse, irregular heartbeats and cardiac arrest;<br>‣ gastrointestinal: irritation, ulcers, nausea and vomiting (may be bloody), and abdominal pain.<br>Material is highly volatile and may quickly form a concentrated atmosphere in confined or unventilated areas. The vapour may displace and replace air in breathing zone, acting as a simple asphyxiant. This may happen with little warning of overexposure.<br>Inhalation of high concentrations of gas/vapour causes lung irritation with coughing and nausea, central nervous depression with headache and dizziness, slowing of reflexes, fatigue and inco-ordination.<br>Animal testing showed no toxic effects from inhaling PGMEA except at very high concentrations. A concentration of 1000 parts per million (0.1%) caused no effects.<br>**WARNING**:Intentional misuse by concentrating/inhaling contents may be lethal.<br>Headache, fatigue, tiredness, irritability and digestive disturbances (nausea, loss of appetite and bloating) are the most common symptoms of xylene overexposure. Injury to the heart, liver, kidneys and nervous system has also been noted amongst workers.<br>The odour of isopropanol may give some warning of exposure, but odour fatigue may occur. Inhalation of isopropanol may produce irritation of the nose and throat with sneezing, sore throat and runny nose.<br>Xylene is a central nervous system depressant |
| **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.<br>Not normally a hazard due to physical form of product.<br>Considered an unlikely route of entry in commercial/industrial environments<br>Swallowing 10 millilitres of isopropanol may cause serious injury; 100 millilitres may be fatal if not properly treated. The adult single lethal dose is approximately 250 millilitres. Isopropanol is twice as poisonous as ethanol, and the effects caused are similar, except that isopropanol does not cause an initial feeling of well-being. Swallowing may cause nausea, vomiting and diarrhea; vomiting and stomach inflammation is more prominent with isopropanol than with ethanol.<br>Considered an unlikely route of entry in commercial/industrial environments. The liquid may produce gastrointestinal discomfort and may be harmful if swallowed. |
| **Skin Contact** | The material may cause moderate inflammation of the skin either following direct contact or after a delay of some time. Repeated exposure can cause contact dermatitis which is characterised by redness, swelling and blistering.<br>Repeated exposure may cause skin cracking, flaking or drying following normal handling and use.<br>Skin contact with the material may damage the health of the individual; systemic effects may result following absorption.<br>Animal testing showed repeated application of commercial grade PGMEA to skin caused slight redness and very mild exfoliation.<br>Spray mist may produce discomfort<br>Open cuts, abraded or irritated skin should not be exposed to this material<br>Isopropanol, also known as IPA, is a chemical that has low toxicity when it comes to immediate exposure. It can irritate the eyes and cause discomfort in high concentrations of its vapors. Prolonged exposure to these vapors can lead to depression of the central nervous system. Some people may experience irritation or sensitivity on their skin when using isopropanol. |
| **Eye** | Not considered to be a risk because of the extreme volatility of the gas.<br>Undiluted propylene glycol monomethyl ether acetate (PGMEA) causes moderate discomfort, slight redness of the conjunctiva and slight injury to the cornea in animal testing.<br>Isopropanol vapour may cause mild eye irritation at 400 parts per million. Splashes may cause severe eye irritation, possible burns to the cornea and eye damage. Eye contact may cause tearing and blurring of vision. |

| | |
|---|---|
| | There is evidence that material may produce eye irritation in some persons and produce eye damage 24 hours or more after instillation. Severe inflammation may be expected with pain. |
| **Chronic** | Harmful: danger of serious damage to health by prolonged exposure through inhalation.<br>This material can cause serious damage if one is exposed to it for long periods. It can be assumed that it contains a substance which can produce severe defects.<br>Based on experience with animal studies, exposure to the material may result in toxic effects to the development of the foetus, at levels which do not cause significant toxic effects to the mother.<br>There has been some concern that this material can cause cancer or mutations but there is not enough data to make an assessment.<br>Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.<br>Animal testing shows repeated exposure to higher concentrations of propylene glycol monomethyl ether acetate (PGMEA) causes mild liver and kidney damage. The beta-isomer, a minor component, may cause birth defects if PGMEA is inhaled during pregnancy. Otherwise, PGMEA has not been shown to have developmental toxicity. It may damage the foetus but only at levels that are also toxic to the mother.<br>Main route of exposure to the gas in the workplace is by inhalation.<br>Intentional abuse (glue sniffing) or occupational exposure to toluene can result in chronic habituation. Chronic abuse has caused inco-ordination, tremors of the extremeties (due to widespread cerebrum withering), headache, abnormal speech, temporary memory loss, convulsions, coma, drowsiness, reduced colour perception, blindness, nystagmus (rapid, involuntary eye movements), hearing loss leading to deafness and mild dementia.<br>Women exposed to xylene in the first 3 months of pregnancy showed a slightly increased risk of miscarriage and birth defects.<br>Evaluation of workers chronically exposed to xylene has demonstrated lack of genetic toxicity.<br>Long term, or repeated exposure of isopropanol may cause inco-ordination and tiredness.<br>Repeated inhalation exposure to isopropanol may produce sleepiness, inco-ordination and liver degeneration. Animal data show developmental effects only at exposure levels that produce toxic effects in adult animals. Isopropanol does not cause genetic damage. |

| **CRC Fire Paint Aerosol** | **TOXICITY** | **IRRITATION** |
|---|---|---|
| | Not Available | Not Available |

| **toluene** | **TOXICITY** | **IRRITATION** |
|---|---|---|
| | Dermal (rabbit) LD50: 12124 mg/kg[2] | Eye (Human): 300ppm |
| | Inhalation (Rat) LC50: >13350 ppm4h[2] | Eye (Rodent - rabbit): 0.1mL |
| | Oral (Rat) LD50: 636 mg/kg[2] | Eye (Rodent - rabbit): 0.1mL - Severe |
| | | Eye (Rodent - rabbit): 100mg/30S - Mild |
| | | Eye (Rodent - rabbit): 2mg/24H - Severe |
| | | Eye (Rodent - rabbit): 870ug - Mild |
| | | Eye: adverse effect observed (irritating)[1] |
| | | Skin (Mammal - pig): 250uL/24H - Mild |
| | | Skin (Rodent - rabbit): 20mg/24H - Moderate |
| | | Skin (Rodent - rabbit): 435mg - Mild |
| | | Skin (Rodent - rabbit): 500mg - Moderate |
| | | Skin: adverse effect observed (irritating)[1] |
| | | Skin: no adverse effect observed (not irritating)[1] |

| **propylene glycol monomethyl ether acetate, alpha-isomer** | **TOXICITY** | **IRRITATION** |
|---|---|---|
| | dermal (rat) LD50: >2000 mg/kg[1] | Eye: no adverse effect observed (not irritating)[1] |
| | Oral (Rat) LD50: 3739 mg/kg[2] | Skin: no adverse effect observed (not irritating)[1] |

| **isopropanol** | **TOXICITY** | **IRRITATION** |
|---|---|---|
| | Dermal (rabbit) LD50: 12800 mg/kg[2] | Eye (Rodent - rabbit): 100mg - Severe |
| | Inhalation (Mouse) LC50: 53 mg/L4h[2] | Eye (Rodent - rabbit): 100mg/24H - Moderate |
| | Oral (Mouse) LD50; 3600 mg/kg[2] | Eye (Rodent - rabbit): 10mg - Moderate |
| | | Eye: adverse effect observed (irritating)[1] |
| | | Skin (Rodent - rabbit): 500mg - Mild |
| | | Skin: no adverse effect observed (not irritating)[1] |

| | | |
|---|---|---|
| **xylene** | **TOXICITY** | **IRRITATION** |
| | Dermal (rabbit) LD50: >1700 mg/kg[2] | Eye (Human): 200ppm |
| | Inhalation (Rat) LC50: 5000 ppm4h[2] | Eye (Rodent - rabbit): 5mg/24H - Severe |
| | Oral (Mouse) LD50; 2119 mg/kg[2] | Eye (Rodent - rabbit): 87mg - Mild |
| | | Eye: adverse effect observed (irritating)[1] |
| | | Skin (Rodent - rabbit): 100% - Moderate |
| | | Skin (Rodent - rabbit): 500mg/24H - Moderate |
| | | Skin (Rodent - rat): 60uL/8H - Mild |
| | | Skin: adverse effect observed (irritating)[1] |
| **LPG (liquefied petroleum gas)** | **TOXICITY** | **IRRITATION** |
| | Inhalation (Rat) LC50: 658 mg/l4h[2] | Not Available |

| | |
|---|---|
| ***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*** |

| | |
|---|---|
| **CRC Fire Paint Aerosol** | Animal testing shows that high concentrations (for example, 0.5%) are associated with birth defects but lower exposures have not been shown to cause adverse effects.<br>The beta isomer of PGMEA comprises only 10% of the commercial material; the remaining 90% is alpha isomer. Hazard appears low, but emphasizes the need for care in handling this chemical. |
| **PROPYLENE GLYCOL MONOMETHYL ETHER ACETATE, ALPHA-ISOMER** | A BASF report (in ECETOC ) showed that inhalation exposure to 545 ppm PGMEA (beta isomer) was associated with a teratogenic response in rabbits; but exposure to 145 ppm and 36 ppm had no adverse effects. The beta isomer of PGMEA comprises only 10% of the commercial material, the remaining 90% is alpha isomer. Hazard appears low but emphasizes the need for care in handling this chemical. [I.C.I] *Shin-Etsu SDS<br>Generally,linear and branched-chain alkyl esters are hydrolysed to their component alcohols and carboxylic acids in the intestinal tract, blood and most tissues throughout the body. Following hydrolysis the component alcohols and carboxylic acids are metabolized<br>Oral acute toxicity studies have been reported for 51 of the 67 esters of aliphatic acyclic primary alcohols and aliphatic linear saturated carboxylic acids. The very low oral acute toxicity of this group of esters is demonstrated by oral LD50 values greater than 1850 mg/kg bw<br>Genotoxicity studies have been performed in vitro using the following esters of aliphatic acyclic primary alcohols and aliphatic linear saturated carboxylic acids: methyl acetate, butyl acetate, butyl stearate and the structurally related isoamyl formate and demonstrates that these substances are not genotoxic.<br>The JEFCA Committee concluded that the substances in this group would not present safety concerns at the current levels of intake the esters of aliphatic acyclic primary alcohols and aliphatic linear saturated carboxylic acids are generally used as flavouring substances up to average maximum levels of 200 mg/kg. Higher levels of use (up to 3000 mg/kg) are permitted in food categories such as chewing gum and hard candy. |
| **ISOPROPANOL** | Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound. Main criteria for diagnosing RADS include the absence of previous airways disease in a non-atopic individual, with sudden onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. Other criteria for diagnosis of RADS include a reversible airflow pattern on lung function tests, moderate to severe bronchial hyperreactivity on methacholine challenge testing, and the lack of minimal lymphocytic inflammation, without eosinophilia.<br>Isopropanol is irritating to the eyes, nose and throat but generally not to the skin. Prolonged high dose exposure may also produce depression of the central nervous system and drowsiness. Few have reported skin irritation. It can be absorbed from the skin or when inhaled. |
| **XYLENE** | Reproductive effector in rats<br>The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. |
| **CRC Fire Paint Aerosol & LPG (LIQUEFIED PETROLEUM GAS)** | No significant acute toxicological data identified in literature search.<br>inhalation of the gas |
| **CRC Fire Paint Aerosol & TOLUENE & ISOPROPANOL & XYLENE** | 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. |
| **CRC Fire Paint Aerosol & PROPYLENE GLYCOL MONOMETHYL ETHER ACETATE, ALPHA-ISOMER** | For propylene glycol ethers (PGEs):<br>Typical propylene glycol ethers include propylene glycol n-butyl ether (PnB); dipropylene glycol n-butyl ether (DPnB); dipropylene glycol methyl ether acetate (DPMA) and tripropylene glycol methyl ether (TPM).<br>Testing of a wide variety of propylene glycol ethers has shown that propylene glycol-based ethers are less toxic than some ethers of the ethylene series. The common toxicities associated with the lower molecular weight homologues of the ethylene series, such as adverse effects on the reproductive organs, the developing embryo and foetus, blood or thymus gland, are not seen with the commercial-grade propylene glycol ethers. In the ethylene series, metabolism of the terminal hydroxyl group produces and alkoxyacetic acid. The reproductive and developmental toxicities of the lower molecular weight homologues in the ethylene series are due specifically to the formation of methoxyacetic and ethoxyacetic acids.<br>Longer chain homologues in the ethylene series are not associated with reproductive toxicity, but can cause haemolysis in sensitive species, also through formation of an alkoxyacetic acid. |

| | |
|---|---|
| **CRC Fire Paint Aerosol & TOLUENE** | For toluene:<br>Acute toxicity: Humans exposed to high levels of toluene for short periods of time experience adverse central nervous system effects ranging from headaches to intoxication, convulsions, narcosis (sleepiness) and death. When inhaled or swallowed, toluene can cause severe central nervous system depression, and in large doses has a narcotic effect. 60mL has caused death. Death of heart muscle fibres, liver swelling, congestion and bleeding of the lungs and kidney injury were all found on autopsy. Exposure to inhalation at a concentration of 600 parts per million for 8 hours resulted in the same and more serious symptoms including euphoria (a feeling of well-being), dilated pupils, convulsions and nausea. |
| **ISOPROPANOL & XYLENE** | The substance is classified by IARC as Group 3:<br>**NOT** classifiable as to its carcinogenicity to humans.<br>Evidence of carcinogenicity may be inadequate or limited in animal testing. |

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

***Legend:*** ✘ ***– Data either not available or does not fill the criteria for classification***
✔ ***– Data available to make classification***

## SECTION 12 Ecological information

### Toxicity

**CRC Fire Paint Aerosol**

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

**toluene**

| Endpoint | Test Duration (hr) | Species | Value | Source |
|---|---|---|---|---|
| NOEC(ECx) | 168h | Crustacea | 0.74mg/l | 2 |
| EC50 | 72h | Algae or other aquatic plants | 12.5mg/L | 4 |
| EC50 | 48h | Crustacea | 3.78mg/L | 5 |
| EC50 | 96h | Algae or other aquatic plants | >376.71mg/L | 4 |
| LC50 | 96h | Fish | 5-35mg/l | 4 |

**propylene glycol monomethyl ether acetate, alpha-isomer**

| Endpoint | Test Duration (hr) | Species | Value | Source |
|---|---|---|---|---|
| NOEC(ECx) | 336h | Fish | 47.5mg/l | 2 |
| EC50 | 72h | Algae or other aquatic plants | >1000mg/l | 2 |
| EC50 | 48h | Crustacea | 373mg/l | 2 |
| EC50 | 96h | Algae or other aquatic plants | >1000mg/l | 2 |
| LC50 | 96h | Fish | 100-180mg/l | 2 |

**isopropanol**

| Endpoint | Test Duration (hr) | Species | Value | Source |
|---|---|---|---|---|
| EC50 | 72h | Algae or other aquatic plants | >1000mg/l | 1 |
| EC50 | 48h | Crustacea | 7550mg/l | 4 |
| EC50 | 96h | Algae or other aquatic plants | >1000mg/l | 1 |
| EC50(ECx) | 24h | Algae or other aquatic plants | 0.011mg/L | 4 |
| LC50 | 96h | Fish | >1400mg/L | 4 |

**xylene**

| Endpoint | Test Duration (hr) | Species | Value | Source |
|---|---|---|---|---|
| EC50 | 72h | Algae or other aquatic plants | 4.6mg/l | 2 |
| EC50 | 48h | Crustacea | 1.8mg/l | 2 |
| NOEC(ECx) | 73h | Algae or other aquatic plants | 0.44mg/l | 2 |
| LC50 | 96h | Fish | 2.6mg/l | 2 |

**LPG (liquefied petroleum gas)**

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

***Legend:*** ***Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. US EPA, Ecotox database - Aquatic Toxicity Data 4. ECETOC Aquatic Hazard Assessment Data 5. NITE (Japan) - Bioconcentration Data 6. METI (Japan) - Bioconcentration Data 7. Vendor Data 8. User defined data***

For Propylene Glycol Ethers: log Kow's range from 0.309 for TPM to 1.523 for DPnB. Calculated BCFs range from 1.47 for DPnB to 3.16 for DPMA and TPM, indicating low bioaccumulation. Henry's Law Constants are low for all category members, ranging from 5.7 x 10-9 atm-m3/mole for TPM to 2.7 x10-9 atm-m3/mole for PnB.
Environmental Fate: Most are liquids at room temperature and all are water-soluble.
For Aromatic Substances Series:
Environmental Fate: Large, molecularly complex polycyclic aromatic hydrocarbons, or PAHs, are persistent in the environment longer than smaller PAHs.
Atmospheric Fate: PAHs are 'semi-volatile substances" which can move between the atmosphere and the Earth's surface in repeated, temperature-driven cycles of deposition and volatilization. Terrestrial Fate: BTEX compounds have the potential to move through soil and contaminate ground water, and their vapors are highly flammable and explosive.
Ecotoxicity - Within an aromatic series, acute toxicity increases with increasing alkyl substitution on the aromatic nucleus.
For Petroleum Hydrocarbon Gases:
Environmental Fate: Petroleum hydrocarbon gases are primarily produced in petroleum refineries, or in gas plants that separate natural gas and natural gas liquids. This category contains 99 petroleum hydrocarbon gas substances, the majority of which never reach the consumer. Petroleum hydrocarbon gases do not contain inorganic compounds, (e.g. hydrogen sulfide, ammonia, and carbon monoxide), other than asphyxiant gases; the low molecular weight hydrocarbon molecules are primarily responsible for the hazard associated with these gases.
Atmospheric Fate: All components of these gases will evaporate to the air where interaction with hydroxyl radicals is an important fate process.
For Isopropanol (IPA):
log Kow: -0.16- 0.28;
Half-life (hr) air: 33-84;
Half-life (hr) H2O surface water: 130;
Henry's atm m3 /mol: 8.07E-06;
BOD 5: 1.19,60%;
COD: 1.61-2.30, 97%;
ThOD: 2.4;
BOD 20: >70%.
Environmental Fate: IPA is expected to partition primarily to the aquatic compartment (77.7%) with the remainder to the air (22.3%). Overall, IPA presents a low potential hazard to aquatic or terrestrial biota.
Aquatic Fate: IPA has been shown to biodegrade rapidly in aerobic, aqueous biodegradation tests and therefore, would not be expected to persist in aquatic habitats.
For Xylenes:
log Koc : 2.05-3.08; Koc : 25.4-204; Half-life (hr) air : 0.24-42; Half-life (hr) H2O surface water : 24-672; Half-life (hr) H2O ground : 336-8640; Half-life (hr) soil : 52-672; Henry's Pa m3 /mol : 637-879; Henry's atm m3 /mol - 7.68E-03; BOD 5 if unstated - 1.4,1%; COD - 2.56,13% ThOD - 3.125 : BCF : 23; log BCF : 1.17-2.41.
Environmental Fate: Most xylenes released to the environment will occur in the atmosphere and volatilisation is the dominant environmental fate process. Soil - Xylenes are expected to have moderate mobility in soil evaporating rapidly from soil surfaces. The extent of the degradation is expected to depend on its concentration, residence time in the soil, the nature of the soil, and whether resident microbial populations have been acclimated.
For Propane: Koc 460. log
Kow 2.36.
Henry's Law constant of 7.07x10-1 atm-cu m/mole, derived from its vapour pressure, 7150 mm Hg, and water solubility, 62.4 mg/L. Estimated BCF: 13.1.
For Toluene:
log Kow : 2.1-3;
log Koc : 1.12-2.85;
Koc : 37-260;
log Kom : 1.39-2.89;
Half-life (hr) air : 2.4-104;
Half-life (hr) H2O surface water : 5.55-528;
Half-life (hr) H2O ground : 168-2628;
Half-life (hr) soil : <48-240;
Henry's Pa m3 /mol : 518-694;
Henry's atm m3 /mol : 5.94;
E-03BOD 5 0.86-2.12, 5%COD - 0.7-2.52,21-27%;
ThOD - 3.13 ; BCF - 1.67-380;
log BCF - 0.22-3.28.
Atmospheric Fate: The majority of toluene evaporates to the atmosphere from the water and soil. The main degradation pathway for toluene in the atmosphere is reaction with photochemically produced hydroxyl radicals. The estimated atmospheric half life for toluene is about 13 hours.
**DO NOT** discharge into sewer or waterways.

### Persistence and degradability

| Ingredient | Persistence: Water/Soil | Persistence: Air |
|---|---|---|
| toluene | LOW (Half-life = 28 days) | LOW (Half-life = 4.33 days) |
| propylene glycol monomethyl ether acetate, alpha-isomer | LOW | LOW |
| isopropanol | LOW (Half-life = 14 days) | LOW (Half-life = 3 days) |
| xylene | HIGH (Half-life = 360 days) | LOW (Half-life = 1.83 days) |

### Bioaccumulative potential

| Ingredient | Bioaccumulation |
|---|---|
| toluene | LOW (BCF = 90) |
| propylene glycol monomethyl ether acetate, alpha-isomer | LOW (LogKOW = 0.56) |

| Ingredient | Bioaccumulation |
|---|---|
| isopropanol | LOW (LogKOW = 0.05) |
| xylene | MEDIUM (BCF = 740) |
| LPG (liquefied petroleum gas) | LOW (LogKOW = 3.39) |

### Mobility in soil

| Ingredient | Mobility |
|---|---|
| toluene | LOW (Log KOC = 268) |
| propylene glycol monomethyl ether acetate, alpha-isomer | HIGH (Log KOC = 1.838) |
| isopropanol | HIGH (Log KOC = 1.06) |

## SECTION 13 Disposal considerations

### Waste treatment methods

| | |
|---|---|
| **Product / Packaging disposal** | 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.<br>A Hierarchy of Controls seems to be common - the user should investigate:<br>‣ Reduction<br>‣ Reuse<br>‣ Recycling<br>‣ Disposal (if all else fails)<br>This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use.<br>‣ **DO NOT** allow wash water from cleaning or process equipment to enter drains.<br>‣ It may be necessary to collect all wash water for treatment before disposal.<br>‣ In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.<br>‣ Where in doubt contact the responsible authority.<br>‣ Consult State Land Waste Management Authority for disposal.<br>‣ Discharge contents of damaged aerosol cans at an approved site.<br>‣ Allow small quantities to evaporate.<br>‣ **DO NOT** incinerate or puncture aerosol cans. |

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

### Disposal Requirements

Packages that have been in direct contact with the hazardous substance must be only disposed if the hazardous substance was appropriately removed and cleaned out from the package. The package must be disposed according to the manufacturer's directions taking into account the material it is made of. Packages which hazardous content have been appropriately treated and removed may be recycled.
The hazardous substance must only be disposed if it has been treated by a method that changed the characteristics or composition of the substance and it is no longer hazardous.

## SECTION 14 Transport information

### Labels Required

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

### Land transport (UN)

| | |
|---|---|
| 14.1. **UN number or ID number** | 1950 |
| 14.2. **UN proper shipping name** | AEROSOLS |
| 14.3. **Transport hazard class(es)** | Class: 2.1<br>Subsidiary Hazard: Not Applicable |
| 14.4. **Packing group** | Not Applicable |
| | Not Applicable |

| | |
|---|---|
| 14.5. **Environmental hazard** | |
| 14.6. **Special precautions for user** | Special provisions: 63; 190; 277; 327; 344; 381<br>Limited quantity: 1000ml |

### Air transport (ICAO-IATA / DGR)

| | |
|---|---|
| 14.1. **UN number** | 1950 |
| 14.2. **UN proper shipping name** | Aerosols, flammable (engine starting fluid) |
| 14.3. **Transport hazard class(es)** | ICAO/IATA Class: 2.1<br>ICAO / IATA Subsidiary Hazard: Not Applicable<br>ERG Code: 10L |
| 14.4. **Packing group** | Not Applicable |
| 14.5. **Environmental hazard** | Not Applicable |
| 14.6. **Special precautions for user** | Special provisions: A1 A145 A167 A802<br>Cargo Only Packing Instructions: 203<br>Cargo Only Maximum Qty / Pack: 150 kg<br>Passenger and Cargo Packing Instructions: Forbidden<br>Passenger and Cargo Maximum Qty / Pack: Forbidden<br>Passenger and Cargo Limited Quantity Packing Instructions: Forbidden<br>Passenger and Cargo Limited Maximum Qty / Pack: Forbidden |

### Sea transport (IMDG-Code / GGVSee)

| | |
|---|---|
| 14.1. **UN number** | 1950 |
| 14.2. **UN proper shipping name** | AEROSOLS |
| 14.3. **Transport hazard class(es)** | IMDG Class: 2.1<br>IMDG Subsidiary Hazard: Not Applicable |
| 14.4. **Packing group** | Not Applicable |
| 14.5 **Environmental hazard** | Not Applicable |
| 14.6. **Special precautions for user** | EMS Number: F-D, S-U<br>Special provisions: 63 190 277 327 344 381 959<br>Limited Quantities: 1000 ml |

### 14.7. Maritime transport in bulk according to IMO instruments

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

Not Applicable

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

| Product name | Group |
|---|---|
| toluene | Not Applicable |
| propylene glycol monomethyl ether acetate, alpha-isomer | Not Applicable |
| isopropanol | Not Applicable |
| xylene | Not Applicable |
| LPG (liquefied petroleum gas) | Not Applicable |

#### 14.7.3. Transport in bulk in accordance with the IGC Code

| Product name | Ship Type |
|---|---|
| toluene | Not Applicable |
| propylene glycol monomethyl | Not Applicable |

| Product name | Ship Type |
|---|---|
| ether acetate, alpha-isomer | |
| isopropanol | Not Applicable |
| xylene | Not Applicable |
| LPG (liquefied petroleum gas) | Not Applicable |

## SECTION 15 Regulatory information

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

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

| HSR Number | Group Standard |
|---|---|
| HSR002515 | Aerosols (Flammable) Group Standard 2017 |

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

**toluene is found on the following regulatory lists**

Chemical Footprint Project - Chemicals of High Concern List
EAEU Narcotic drugs, psychotropic substances and their precursors - II. Precursors of narcotic drugs and psychotropic substances - List II (Russian)
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Not Classified as Carcinogenic
New Zealand Approved Hazardous Substances with controls
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data
New Zealand Inventory of Chemicals (NZIoC)
New Zealand Workplace Exposure Standards (WES)
Responsible Business Alliance Industry Focus Process Chemicals Policy (RBA IFPC Policy) - Table 1: Industry Focus Process Chemicals List

**propylene glycol monomethyl ether acetate, alpha-isomer is found on the following regulatory lists**

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

**isopropanol is found on the following regulatory lists**

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Not Classified as Carcinogenic
New Zealand Approved Hazardous Substances with controls
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data
New Zealand Inventory of Chemicals (NZIoC)
New Zealand Workplace Exposure Standards (WES)

**xylene is found on the following regulatory lists**

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Not Classified as Carcinogenic
New Zealand Approved Hazardous Substances with controls
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data
New Zealand Inventory of Chemicals (NZIoC)
New Zealand Workplace Exposure Standards (WES)
Responsible Business Alliance Industry Focus Process Chemicals Policy (RBA IFPC Policy) - Table 1: Industry Focus Process Chemicals List

**LPG (liquefied petroleum gas) is found on the following regulatory lists**

Chemical Footprint Project - Chemicals of High Concern List
New Zealand Approved Hazardous Substances with controls
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data
New Zealand Inventory of Chemicals (NZIoC)
New Zealand Workplace Exposure Standards (WES)

### Additional Regulatory Information

Not Applicable

### Hazardous Substance Location

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

| Hazard Class | Quantity (Closed Containers) | Quantity (Open Containers) |
|---|---|---|
| 2.1.2A | 3 000 L (aggregate water capacity) | 3 000 L (aggregate water capacity) |

### Certified Handler

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

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

Refer Group Standards for further information

### Maximum quantities of certain hazardous substances permitted on passenger service vehicles

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

| Hazard Class | Gas (aggregate water capacity in mL) | Liquid (L) | Solid (kg) | Maximum quantity per package for each classification |
|---|---|---|---|---|
| 2.1.2A | | | | 1L (aggregate water capacity) |

### Tracking Requirements

Not Applicable

### National Inventory Status

| National Inventory | Status |
|---|---|
| Australia - AIIC / Australia Non-Industrial Use | Yes |
| Canada - DSL | Yes |
| Canada - NDSL | No (toluene; propylene glycol monomethyl ether acetate, alpha-isomer; isopropanol; xylene; LPG (liquefied petroleum gas)) |
| China - IECSC | Yes |
| Europe - EINEC / ELINCS / NLP | Yes |
| Japan - ENCS | Yes |
| Korea - KECI | Yes |
| New Zealand - NZIoC | Yes |
| Philippines - PICCS | Yes |
| USA - TSCA | All chemical substances in this product have been designated as TSCA Inventory ‘Active' |
| Taiwan - TCSI | Yes |
| Mexico - INSQ | Yes |
| Vietnam - NCI | Yes |
| Russia - FBEPH | Yes |
| UAE - Control List (Banned/Restricted Substances) | No (toluene; propylene glycol monomethyl ether acetate, alpha-isomer; isopropanol; xylene; LPG (liquefied petroleum gas)) |
| ***Legend:*** | ***Yes = All CAS declared ingredients are on the inventory***<br>***No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.*** |

## SECTION 16 Other information

| | |
|---|---|
| **Revision Date** | 17/02/2025 |
| **Initial Date** | 18/06/2015 |

### SDS Version Summary

| Version | Date of Update | Sections Updated |
|---|---|---|
| 5.1 | 23/12/2022 | Classification review due to GHS Revision change. |
| 6.1 | 17/02/2025 | Hazards identification - Classification |

### Other information

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

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

engineering controls must be considered.

### Definitions and abbreviations

- PC—TWA: Permissible Concentration-Time Weighted Average
- PC—STEL: Permissible Concentration-Short Term Exposure Limit
- IARC: International Agency for Research on Cancer
- ACGIH: American Conference of Governmental Industrial Hygienists
- STEL: Short Term Exposure Limit
- TEEL: Temporary Emergency Exposure Limit。
- IDLH: Immediately Dangerous to Life or Health Concentrations
- ES: Exposure Standard
- OSF: Odour Safety Factor
- NOAEL: No Observed Adverse Effect Level
- LOAEL: Lowest Observed Adverse Effect Level
- TLV: Threshold Limit Value
- LOD: Limit Of Detection
- OTV: Odour Threshold Value
- BCF: BioConcentration Factors
- BEI: Biological Exposure Index
- DNEL: Derived No-Effect Level
- PNEC: Predicted no-effect concentration
- MARPOL: International Convention for the Prevention of Pollution from Ships
- IMSBC: International Maritime Solid Bulk Cargoes Code
- IGC: International Gas Carrier Code
- IBC: International Bulk Chemical Code

- AIIC: Australian Inventory of Industrial Chemicals
- DSL: Domestic Substances List
- NDSL: Non-Domestic Substances List
- IECSC: Inventory of Existing Chemical Substance in China
- EINECS: European INventory of Existing Commercial chemical Substances
- ELINCS: European List of Notified Chemical Substances
- NLP: No-Longer Polymers
- ENCS: Existing and New Chemical Substances Inventory
- KECI: Korea Existing Chemicals Inventory
- NZIoC: New Zealand Inventory of Chemicals
- PICCS: Philippine Inventory of Chemicals and Chemical Substances
- TSCA: Toxic Substances Control Act
- TCSI: Taiwan Chemical Substance Inventory
- INSQ: Inventario Nacional de Sustancias Químicas
- NCI: National Chemical Inventory
- FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

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