



# CRC Zinc It Aerosol

## CRC Industries (CRC Industries New Zealand)

Chemwatch: 17012

Version No: 12.1

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

Chemwatch Hazard Alert Code: 4

Issue Date: 10/03/2023

Print Date: 10/09/2024

S.GHS.NZL.EN

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

#### Product Identifier

|                               |                     |
|-------------------------------|---------------------|
| Product name                  | CRC Zinc It Aerosol |
| Chemical Name                 | Not Applicable      |
| Synonyms                      | CRC2085A; CRC2085AB |
| 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

|                          |                                                                                                                                                  |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| Relevant identified uses | Anti corrosive interior / exterior zinc spray coating for metal protection.<br>Application is by spray atomisation from a hand held aerosol pack |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|

#### Details of the manufacturer or supplier 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                 | <a href="http://www.crc.co.nz">www.crc.co.nz</a>    |
| 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 numbers       | NZ Poisons Centre 0800 POISON (0800 764 766) | +64 800 700 112                     |
| Other emergency telephone numbers | 111 (NZ Emergency Services)                  | +61 3 9573 3188                     |

### SECTION 2 Hazards identification

#### Classification of the substance or mixture

|                                                 |                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Classification <sup>[1]</sup>                   | Aerosols 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, Hazardous to the Aquatic Environment Acute Hazard Category 1, Hazardous to the Aquatic Environment Long-Term Hazard Category 1 |
| 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, 9.1A                                                                                                                                                                                                                                                                                                                          |

#### Label elements

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

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

#### Hazard statement(s)

|                  |                                                                          |
|------------------|--------------------------------------------------------------------------|
| <b>H222+H229</b> | Extremely flammable aerosol. Pressurized container: may burst if heated. |
| <b>H302</b>      | Harmful if swallowed.                                                    |
| <b>H315</b>      | Causes skin irritation.                                                  |
| <b>H319</b>      | Causes serious eye irritation.                                           |
| <b>H361</b>      | Suspected of damaging fertility or the unborn child.                     |
| <b>H373</b>      | May cause damage to organs through prolonged or repeated exposure.       |
| <b>H410</b>      | Very toxic to aquatic life with long lasting effects.                    |

#### Precautionary statement(s) Prevention

|             |                                                                                                |
|-------------|------------------------------------------------------------------------------------------------|
| <b>P201</b> | Obtain special instructions before use.                                                        |
| <b>P210</b> | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. |
| <b>P211</b> | Do not spray on an open flame or other ignition source.                                        |
| <b>P251</b> | Do not pierce or burn, even after use.                                                         |

#### Precautionary statement(s) Response

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

#### Precautionary statement(s) Storage

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

#### Precautionary statement(s) Disposal

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

### SECTION 3 Composition / information on ingredients

#### Substances

See section below for composition of Mixtures

#### Mixtures

| CAS No        | %[weight] | Name                                 |
|---------------|-----------|--------------------------------------|
| 7440-66-6     | 20-40     | <u>zinc powder</u>                   |
| 108-88-3      | 5-20      | <u>toluene</u>                       |
| 1330-20-7     | 5-20      | <u>xylene</u>                        |
| 6422-86-2     | <1        | <u>diethyl terephthalate</u>         |
| Not Available | 1-9       | additives, unregulated               |
| Not Available |           | propellant as                        |
| 68476-85-7.   | 10-30     | <u>LPG (liquefied petroleum gas)</u> |

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

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Eye Contact</b> | <p>If aerosols come in contact with the eyes:</p> <ul style="list-style-type: none"><li>▶ Immediately hold the eyelids apart and flush the eye continuously for at least 15 minutes with fresh running water.</li><li>▶ 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.</li><li>▶ Transport to hospital or doctor without delay.</li><li>▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li></ul> |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Skin Contact</b> | <p>If solids or aerosol mists are deposited upon the skin:</p> <ul style="list-style-type: none"> <li>▶ Flush skin and hair with running water (and soap if available).</li> <li>▶ Remove any adhering solids with industrial skin cleansing cream.</li> <li>▶ <b>DO NOT use solvents.</b></li> <li>▶ Seek medical attention in the event of irritation.</li> </ul>                                                                                                                                                                                                                                             |
| <b>Inhalation</b>   | <p>If aerosols, fumes or combustion products are inhaled:</p> <ul style="list-style-type: none"> <li>▶ Remove to fresh air.</li> <li>▶ Lay patient down. Keep warm and rested.</li> <li>▶ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.</li> <li>▶ 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.</li> <li>▶ Transport to hospital, or doctor.</li> </ul> |
| <b>Ingestion</b>    | <ul style="list-style-type: none"> <li>▶ Avoid giving milk or oils.</li> <li>▶ Avoid giving alcohol.</li> </ul> <p>Not considered a normal route of entry.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

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

Treat symptomatically.

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 (pO<sub>2</sub> <50 mm Hg or pCO<sub>2</sub> > 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 (pO<sub>2</sub> < 50 mm Hg or pCO<sub>2</sub> > 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 |          |

- ▶ Absorption of zinc compounds occurs in the small intestine.
- ▶ The metal is heavily protein bound.
- ▶ Elimination results primarily from faecal excretion.
- ▶ The usual measures for decontamination (Ipecac Syrup, lavage, charcoal or cathartics) may be administered, although patients usually have sufficient vomiting not to require them.
- ▶ CaNa<sub>2</sub>EDTA has been used successfully to normalise zinc levels and is the agent of choice.

## SECTION 5 Firefighting measures

### Extinguishing media

#### SMALL FIRE:

- Water spray, dry chemical or CO<sub>2</sub>

#### LARGE FIRE:

- Water spray or fog.

### Special hazards arising from the substrate or mixture

|                             |                                                                                                                                                                                                                                                                                   |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Fire Incompatibility</b> | <ul style="list-style-type: none"><li>▸ Reacts with acids producing flammable / explosive hydrogen (H<sub>2</sub>) gas</li><li>▸ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result</li></ul> |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### Advice for firefighters

|                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Fire Fighting</b>         | <ul style="list-style-type: none"><li>▸ Alert Fire Brigade and tell them location and nature of hazard.</li><li>▸ May be violently or explosively reactive.</li><li>▸ Wear breathing apparatus plus protective gloves.</li><li>▸ Prevent, by any means available, spillage from entering drains or water course.</li></ul>                                                                                                                                                                                                                                                                  |
| <b>Fire/Explosion Hazard</b> | <ul style="list-style-type: none"><li>▸ Liquid and vapour are highly flammable.</li><li>▸ Severe fire hazard when exposed to heat or flame.</li><li>▸ Vapour forms an explosive mixture with air.</li><li>▸ Severe explosion hazard, in the form of vapour, when exposed to flame or spark.</li></ul> <p>Combustion products include:<br/>carbon dioxide (CO<sub>2</sub>)<br/>metal oxides<br/>other pyrolysis products typical of burning organic material.</p> <p><b>Contains low boiling substance:</b> Closed containers may rupture due to pressure buildup under fire conditions.</p> |

## SECTION 6 Accidental release measures

### Personal precautions, protective equipment and emergency procedures

See section 8

### Environmental precautions

See section 12

### Methods and material for containment and cleaning up

|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Minor Spills</b> | <ul style="list-style-type: none"><li>▸ Clean up all spills immediately.</li><li>▸ Avoid breathing vapours and contact with skin and eyes.</li><li>▸ Wear protective clothing, impervious gloves and safety glasses.</li><li>▸ Shut off all possible sources of ignition and increase ventilation.</li></ul>                                                                                                                                                                                                                        |
| <b>Major Spills</b> | <ul style="list-style-type: none"><li>▸ Remove leaking cylinders to a safe place if possible.</li><li>▸ Release pressure under safe, controlled conditions by opening the valve.</li><li>▸ DO NOT exert excessive pressure on valve; DO NOT attempt to operate damaged valve.</li><li>▸ Clear area of personnel and move upwind.</li><li>▸ Alert Fire Brigade and tell them location and nature of hazard.</li><li>▸ May be violently or explosively reactive.</li><li>▸ Wear breathing apparatus plus protective gloves.</li></ul> |

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

## SECTION 7 Handling and storage

### Precautions for safe handling

|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Safe handling</b>     | <ul style="list-style-type: none"><li>▸ Avoid all personal contact, including inhalation.</li><li>▸ Wear protective clothing when risk of exposure occurs.</li><li>▸ Use in a well-ventilated area.</li><li>▸ Prevent concentration in hollows and sumps.</li></ul>                                                                                                                                                                                                                  |
| <b>Other information</b> | <ul style="list-style-type: none"><li>▸ Keep dry to avoid corrosion of cans. Corrosion may result in container perforation and internal pressure may eject contents of can</li><li>▸ Store in original containers in approved flammable liquid storage area.</li><li>▸ <b>DO NOT store in pits, depressions, basements or areas where vapours may be trapped.</b></li><li>▸ No smoking, naked lights, heat or ignition sources.</li><li>▸ Keep containers securely sealed.</li></ul> |

Conditions for safe storage, including any incompatibilities

|                         |                                                                                                                                                                                                                                                                                                                       |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Suitable container      | <div><div>▶ CARE: Packing of high density product in light weight metal or plastic packages may result in container collapse with product release</div><div>▶ Heavy gauge metal packages / Heavy gauge metal drums</div><div>▶ Aerosol dispenser.</div><div>▶ Check that containers are clearly labelled.</div></div> |
| Storage incompatibility | <div><div>▶ Avoid reaction with oxidising agents</div></div>                                                                                                                                                                                                                                                          |

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) | zinc powder                   | Respirable dust (not otherwise classified) | 3 mg/m3               | Not Available       | Not Available | Not Available                                                                                           |
| New Zealand Workplace Exposure Standards (WES) | zinc powder                   | Inhalable dust (not otherwise classified)  | 10 mg/m3              | Not Available       | Not Available | Not Available                                                                                           |
| 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) | xylene                        | Dimethylbenzene                            | 50 ppm / 217 mg/m3    | Not Available       | Not Available | Not Available                                                                                           |
| New Zealand Workplace Exposure Standards (WES) | dioctyl terephthalate         | Respirable dust (not otherwise classified) | 3 mg/m3               | Not Available       | Not Available | Not Available                                                                                           |
| New Zealand Workplace Exposure Standards (WES) | dioctyl terephthalate         | Inhalable dust (not otherwise classified)  | 10 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                                                                                           |

Emergency Limits

| Ingredient                    | TEEL-1        | TEEL-2        | TEEL-3        |
|-------------------------------|---------------|---------------|---------------|
| zinc powder                   | 6 mg/m3       | 21 mg/m3      | 120 mg/m3     |
| toluene                       | Not Available | Not Available | Not Available |
| xylene                        | Not Available | Not Available | Not Available |
| LPG (liquefied petroleum gas) | 65,000 ppm    | 2.30E+05 ppm  | 4.00E+05 ppm  |

| Ingredient                    | Original IDLH | Revised IDLH  |
|-------------------------------|---------------|---------------|
| zinc powder                   | Not Available | Not Available |
| toluene                       | 500 ppm       | Not Available |
| xylene                        | 900 ppm       | Not Available |
| dioctyl terephthalate         | Not Available | Not Available |
| LPG (liquefied petroleum gas) | Not Available | Not Available |

Exposure controls

|                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Appropriate engineering controls                                      | <div><div>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.</div><div>The basic types of engineering controls are:</div><div>Process controls which involve changing the way a job activity or process is done to reduce the risk.</div><div>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.</div></div> |
| Individual protection measures, such as personal protective equipment | <div><div></div></div>                                                                                                                                                                                                                                                                                                                                   |
| Eye and face protection                                               | <div><div>▶ Safety glasses with side shields.</div><div>▶ Chemical goggles. [AS/NZS 1337.1, EN166 or national equivalent]</div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

|                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                              | <ul style="list-style-type: none"> <li>▶ 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.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Skin protection</b>       | See Hand protection below                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Hands/feet protection</b> | <ul style="list-style-type: none"> <li>▶ No special equipment needed when handling small quantities.</li> <li>▶ OTHERWISE:</li> <li>▶ For potentially moderate exposures:</li> <li>▶ Wear general protective gloves, eg. light weight rubber gloves.</li> <li>▶ For potentially heavy exposures:</li> <li>▶ Wear chemical protective gloves, eg. PVC. and safety footwear.</li> </ul>                                                                                                                                                                                                                                                                                               |
| <b>Body protection</b>       | See Other protection below                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Other protection</b>      | <p>No special equipment needed when handling small quantities.</p> <p><b>OTHERWISE:</b></p> <ul style="list-style-type: none"> <li>▶ Overalls.</li> <li>▶ Skin cleansing cream.</li> <li>▶ Eyewash unit.</li> <li>▶ 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.</li> <li>▶ Avoid dangerous levels of charge by ensuring a low resistivity of the surface material worn outermost.</li> </ul> <p>BREITHERICK: Handbook of Reactive Chemical Hazards.</p> |

## 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 Zinc It Aerosol

| Material          | CPI |
|-------------------|-----|
| PE/EVAL/PE        | A   |
| PVA               | A   |
| VITON             | A   |
| TEFLON            | B   |
| BUTYL             | C   |
| BUTYL/NEOPRENE    | C   |
| CPE               | C   |
| HYPALON           | C   |
| NAT+NEOPR+NITRILE | C   |
| NATURAL+NEOPRENE  | C   |
| NEOPRENE          | C   |
| NEOPRENE/NATURAL  | C   |
| NITRILE           | C   |
| NITRILE+PVC       | C   |
| PVC               | C   |
| PVDC/PE/PVDC      | C   |
| SARANEX-23        | C   |
| SARANEX-23 2-PLY  | 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.

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

## SECTION 9 Physical and chemical properties

Information on basic physical and chemical properties

|                                                |                                                                                                                                                                                                                                                        |                                                     |                |
|------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|----------------|
| Appearance                                     | Grey viscous liquid with a solvent odour; not miscible with water.<br>Supplied as an aerosol pack. Contents under <b>PRESSURE</b> . Contains highly flammable hydrocarbon propellant.<br>Supplied as an aerosol pack. Contents under <b>PRESSURE</b> . |                                                     |                |
| Physical state                                 | Liquid                                                                                                                                                                                                                                                 | Relative density (Water = 1)                        | 2.1            |
| Odour                                          | Not Available                                                                                                                                                                                                                                          | Partition coefficient n-octanol / water             | Not Available  |
| Odour threshold                                | Not Available                                                                                                                                                                                                                                          | Auto-ignition temperature (°C)                      | Not Available  |
| pH (as supplied)                               | Not Applicable                                                                                                                                                                                                                                         | Decomposition temperature (°C)                      | Not Available  |
| Melting point / freezing point (°C)            | Not Available                                                                                                                                                                                                                                          | Viscosity (cSt)                                     | Not Available  |
| Initial boiling point and boiling range (°C)   | 110                                                                                                                                                                                                                                                    | 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)                          | UNDER PRESSURE                                                                                                                                                                                                                                         | Gas group                                           | Not Available  |
| Solubility in water                            | Immiscible                                                                                                                                                                                                                                             | pH as a solution (1%)                               | Not Applicable |
| Vapour density (Air = 1)                       | >1                                                                                                                                                                                                                                                     | 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

|                                    |                                                                                                                                                                                                       |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Reactivity                         | See section 7                                                                                                                                                                                         |
| Chemical stability                 | <ul style="list-style-type: none"><li>▶ Elevated temperatures.</li><li>▶ Presence of open flame.</li><li>▶ Product is considered stable.</li><li>▶ Hazardous polymerisation will not occur.</li></ul> |
| Possibility of hazardous reactions | See section 7                                                                                                                                                                                         |
| Conditions to avoid                | See section 7                                                                                                                                                                                         |
| Incompatible materials             | See section 7                                                                                                                                                                                         |
| Hazardous decomposition products   | See section 5                                                                                                                                                                                         |

SECTION 11 Toxicological information

Information on toxicological effects

|         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Inhaled | <p>Inhalation of aerosols (mists, fumes), generated by the material during the course of normal handling, may be harmful.</p> <p>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.</p> <p>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.</p> <p>Inhalation of toxic gases may cause:</p> <ul style="list-style-type: none"><li>▶ Central Nervous System effects including depression, headache, confusion, dizziness, stupor, coma and seizures;</li><li>▶ respiratory: acute lung swellings, shortness of breath, wheezing, rapid breathing, other symptoms and respiratory arrest;</li><li>▶ heart: collapse, irregular heartbeats and cardiac arrest;</li><li>▶ gastrointestinal: irritation, ulcers, nausea and vomiting (may be bloody), and abdominal pain.</li></ul> <p>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.</p> <p>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.</p> <p>Symptoms of asphyxia (suffocation) may include headache, dizziness, shortness of breath, muscular weakness, drowsiness and ringing in the ears. If the asphyxia is allowed to progress, there may be nausea and vomiting, further physical weakness and</p> |
|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|



|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                     | <p>unconsciousness and, finally, convulsions, coma and death.</p> <p><b>WARNING: Intentional misuse by concentrating/inhaling contents may be lethal.</b></p> <p>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. Exposure to hydrocarbons may result in irregularity of heart beat. Symptoms of moderate poisoning may include dizziness, headache, nausea.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Ingestion</b>    | <p>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.</p> <p>Swallowing of the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis; serious consequences may result. (ICSC13733)</p> <p>Not normally a hazard due to physical form of product.</p> <p>Considered an unlikely route of entry in commercial/industrial environments</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Skin Contact</b> | <p>Skin contact with the material may be harmful; systemic effects may result following absorption.</p> <p>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.</p> <p>Spray mist may produce discomfort</p> <p>Open cuts, abraded or irritated skin should not be exposed to this material</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Eye</b>          | <p>If applied to the eyes, this material causes severe eye damage. Not considered to be a risk because of the extreme volatility of the gas.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Chronic</b>      | <p>Harmful: danger of serious damage to health by prolonged exposure through inhalation.</p> <p>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.</p> <p>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.</p> <p>Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.</p> <p>Main route of exposure to the gas in the workplace is by inhalation.</p> <p>Women exposed to xylene in the first 3 months of pregnancy showed a slightly increased risk of miscarriage and birth defects.</p> <p>Evaluation of workers chronically exposed to xylene has demonstrated lack of genetic toxicity.</p> <p>Intentional abuse (glue sniffing) or occupational exposure to toluene can result in chronic habituation. Chronic abuse has caused inco-ordination, tremors of the extremities (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.</p> |

|                               |                                                       |                                                                  |
|-------------------------------|-------------------------------------------------------|------------------------------------------------------------------|
| <b>CRC Zinc It Aerosol</b>    | <b>TOXICITY</b>                                       | <b>IRRITATION</b>                                                |
|                               | Not Available                                         | Not Available                                                    |
| <b>zinc powder</b>            | <b>TOXICITY</b>                                       | <b>IRRITATION</b>                                                |
|                               | Dermal (rabbit) LD50: 1130 mg/kg <sup>[2]</sup>       | Eye: no adverse effect observed (not irritating) <sup>[1]</sup>  |
|                               | Oral (Rat) LD50: >2000 mg/kg <sup>[1]</sup>           | Skin: no adverse effect observed (not irritating) <sup>[1]</sup> |
| <b>toluene</b>                | <b>TOXICITY</b>                                       | <b>IRRITATION</b>                                                |
|                               | Dermal (rabbit) LD50: 12124 mg/kg <sup>[2]</sup>      | Eye (rabbit): 2mg/24h - SEVERE                                   |
|                               | Inhalation (Rat) LC50: >13350 ppm4h <sup>[2]</sup>    | Eye (rabbit): 0.87 mg - mild                                     |
|                               | Oral (Rat) LD50: 636 mg/kg <sup>[2]</sup>             | Eye (rabbit): 100 mg/30sec - mild                                |
|                               |                                                       | Eye: adverse effect observed (irritating) <sup>[1]</sup>         |
|                               |                                                       | Skin (rabbit): 20 mg/24h - moderate                              |
|                               |                                                       | Skin (rabbit): 500 mg - moderate                                 |
|                               |                                                       | Skin: adverse effect observed (irritating) <sup>[1]</sup>        |
| <b>xylene</b>                 | <b>TOXICITY</b>                                       | <b>IRRITATION</b>                                                |
|                               | Dermal (rabbit) LD50: >1700 mg/kg <sup>[2]</sup>      | Eye (human): 200 ppm irritant                                    |
|                               | Inhalation (Rat) LC50: 5000 ppm4h <sup>[2]</sup>      | Eye (rabbit): 5 mg/24h SEVERE                                    |
|                               | Oral (Mouse) LD50; 2119 mg/kg <sup>[2]</sup>          | Eye (rabbit): 87 mg mild                                         |
|                               |                                                       | Eye: adverse effect observed (irritating) <sup>[1]</sup>         |
|                               |                                                       | Skin (rabbit): 500 mg/24h moderate                               |
| <b>diocetyl terephthalate</b> | <b>TOXICITY</b>                                       | <b>IRRITATION</b>                                                |
|                               | Dermal (Guinea Pig) LD50: >19.68 mg/kg <sup>[2]</sup> | Eye (rabbit): slight                                             |
|                               | Oral (Mouse) LD50; >3200 mg/kg <sup>[2]</sup>         | Eye: no adverse effect observed (not irritating) <sup>[1]</sup>  |



|                               |                                                  |                                                                  |
|-------------------------------|--------------------------------------------------|------------------------------------------------------------------|
|                               |                                                  | Skin (g. pig): slight [Eastman]                                  |
|                               |                                                  | Skin: no adverse effect observed (not irritating) <sup>[1]</sup> |
| LPG (liquefied petroleum gas) | <b>TOXICITY</b>                                  | <b>IRRITATION</b>                                                |
|                               | Inhalation (Rat) LC50: 658 mg/l4h <sup>[2]</sup> | 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**

|                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ZINC POWDER                            | Inhalation (human) TCLo: 124 mg/m3/50min. Skin (human):0.3mg/3DaysInt. mild                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 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.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| XYLENE                                 | Reproductive effector in rats<br>The substance is classified by IARC as Group 3:<br><b>NOT</b> classifiable as to its carcinogenicity to humans.<br>Evidence of carcinogenicity may be inadequate or limited in animal testing.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| DIOCTYL TEREPHTHALATE                  | For terephthalic acid and its ester hydrolysates:<br><b>Human Health:</b> Results from repeated dose and acute toxicity studies via the oral, dermal and inhalation routes indicate that terephthalic acid is of low order of toxicity, and it is non-irritating to the skin and eyes. A 15 week oral repeat dose study in rats reported a LOAEL of 3837 mg/kg b.w./day for male rats and 4523 mg/kg/day for female rats. The NOAEL is 1220 mg/kg b.w./day for male rats and 1456 mg/kg b.w./day for female rats. Repeated exposure inhalation studies up to 10 mg/m <sup>3</sup> (6 hours/day, 5 days/week) using rats or guinea pigs showed no adverse effects, except for mild respiratory irritation in one study with rats.<br>The primary adverse effect of high doses of terephthalic acid to rats is almost completely restricted to the urinary tract. Tests reveal that terephthalic acid has low levels of toxicity when swallowed, inhaled or on skin contact. Animal testing shows that it causes mild airway irritation, and causes inflammation and stones in the bladder, with tumours appearing on chronic exposure. It is unlikely that humans would ingest enough terephthalic acid to cause bladder stones. Terephthalic acid does not cause reproductive toxicity, or genetic damage. |
| LPG (LIQUEFIED PETROLEUM GAS)          | No significant acute toxicological data identified in literature search. inhalation of the gas                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| CRC Zinc It Aerosol & XYLENE           | The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| CRC Zinc It Aerosol & TOLUENE & 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.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

|                                   |   |                          |   |
|-----------------------------------|---|--------------------------|---|
| 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 Zinc It Aerosol | Endpoint      | Test Duration (hr) | Species                       | Value           | Source        |
|---------------------|---------------|--------------------|-------------------------------|-----------------|---------------|
|                     | Not Available | Not Available      | Not Available                 | Not Available   | Not Available |
| zinc powder         | Endpoint      | Test Duration (hr) | Species                       | Value           | Source        |
|                     | EC50          | 72h                | Algae or other aquatic plants | 0.005mg/l       | 4             |
|                     | EC50          | 48h                | Crustacea                     | 0.06-0.08mg/L   | 4             |
|                     | LC50          | 96h                | Fish                          | 0.011-0.014mg/L | 4             |

|                               |                 |                                                                                                                                                                                                                                                                                                                                 |                               |               |               |
|-------------------------------|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------|---------------|
|                               | EC50            | 96h                                                                                                                                                                                                                                                                                                                             | Algae or other aquatic plants | 0.042mg/L     | 2             |
|                               | NOEC(ECx)       | 672h                                                                                                                                                                                                                                                                                                                            | Fish                          | 0.003mg/L     | 4             |
| toluene                       | <b>Endpoint</b> | <b>Test Duration (hr)</b>                                                                                                                                                                                                                                                                                                       | <b>Species</b>                | <b>Value</b>  | <b>Source</b> |
|                               | EC50            | 72h                                                                                                                                                                                                                                                                                                                             | Algae or other aquatic plants | 12.5mg/L      | 4             |
|                               | NOEC(ECx)       | 168h                                                                                                                                                                                                                                                                                                                            | Crustacea                     | 0.74mg/l      | 2             |
|                               | EC50            | 48h                                                                                                                                                                                                                                                                                                                             | Crustacea                     | 3.78mg/L      | 5             |
|                               | LC50            | 96h                                                                                                                                                                                                                                                                                                                             | Fish                          | 5-35mg/l      | 4             |
|                               | EC50            | 96h                                                                                                                                                                                                                                                                                                                             | Algae or other aquatic plants | >376.71mg/L   | 4             |
| xylene                        | <b>Endpoint</b> | <b>Test Duration (hr)</b>                                                                                                                                                                                                                                                                                                       | <b>Species</b>                | <b>Value</b>  | <b>Source</b> |
|                               | EC50            | 72h                                                                                                                                                                                                                                                                                                                             | Algae or other aquatic plants | 4.6mg/l       | 2             |
|                               | EC50            | 48h                                                                                                                                                                                                                                                                                                                             | Crustacea                     | 1.8mg/l       | 2             |
|                               | LC50            | 96h                                                                                                                                                                                                                                                                                                                             | Fish                          | 2.6mg/l       | 2             |
|                               | NOEC(ECx)       | 73h                                                                                                                                                                                                                                                                                                                             | Algae or other aquatic plants | 0.44mg/l      | 2             |
| dioctyl terephthalate         | <b>Endpoint</b> | <b>Test Duration (hr)</b>                                                                                                                                                                                                                                                                                                       | <b>Species</b>                | <b>Value</b>  | <b>Source</b> |
|                               | EC50            | 72h                                                                                                                                                                                                                                                                                                                             | Algae or other aquatic plants | >0.86mg/l     | 2             |
|                               | EC50            | 48h                                                                                                                                                                                                                                                                                                                             | Crustacea                     | >0.001mg/L    | 2             |
|                               | NOEC(ECx)       | 504h                                                                                                                                                                                                                                                                                                                            | Crustacea                     | >=0.001mg/L   | 2             |
|                               | LC50            | 96h                                                                                                                                                                                                                                                                                                                             | Fish                          | >984mg/l      | 2             |
| LPG (liquefied petroleum gas) | <b>Endpoint</b> | <b>Test Duration (hr)</b>                                                                                                                                                                                                                                                                                                       | <b>Species</b>                | <b>Value</b>  | <b>Source</b> |
|                               | Not Available   | Not Available                                                                                                                                                                                                                                                                                                                   | Not Available                 | Not Available | Not Available |
| <b>Legend:</b>                |                 | <b>Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data</b> |                               |               |               |

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

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

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

For Metal:

Atmospheric Fate - Metal-containing inorganic substances generally have negligible vapour pressure and are not expected to partition to air.

Environmental Fate: Environmental processes, such as oxidation, the presence of acids or bases and microbiological processes, may transform insoluble metals to more soluble ionic forms. Environmental processes may enhance bioavailability and may also be important in changing solubilities.

Aquatic/Terrestrial Fate: When released to dry soil, most metals will exhibit limited mobility and remain in the upper layer; some will leach locally into ground water and/ or surface water ecosystems when soaked by rain or melt ice. A metal ion is considered infinitely persistent because it cannot degrade further.

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 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 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) |
| xylene                | HIGH (Half-life = 360 days) | LOW (Half-life = 1.83 days) |
| dioctyl terephthalate | LOW                         | LOW                         |

Bioaccumulative potential

| Ingredient            | Bioaccumulation       |
|-----------------------|-----------------------|
| toluene               | LOW (BCF = 90)        |
| xylene                | MEDIUM (BCF = 740)    |
| dioctyl terephthalate | LOW (LogKOW = 8.3918) |

Mobility in soil

| Ingredient            | Mobility               |
|-----------------------|------------------------|
| toluene               | LOW (Log KOC = 268)    |
| dioctyl terephthalate | LOW (Log KOC = 162100) |

SECTION 13 Disposal considerations

Waste treatment methods

|                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product / Packaging disposal | <ul style="list-style-type: none"><li>DO NOT allow wash water from cleaning or process equipment to enter drains.</li><li>It may be necessary to collect all wash water for treatment before disposal.</li><li>In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.</li><li>Where in doubt contact the responsible authority.</li><li>Consult State Land Waste Management Authority for disposal.</li><li>Discharge contents of damaged aerosol cans at an approved site.</li><li>Allow small quantities to evaporate.</li><li>DO NOT incinerate or puncture aerosol cans.</li></ul> |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

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 |  |
| 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) | <table><tr><td>Class</td><td>2.1</td></tr></table> | Class | 2.1 |
| Class                            | 2.1                                                |       |     |

|                                    |                           |                             |
|------------------------------------|---------------------------|-----------------------------|
|                                    | Subsidiary Hazard         | Not Applicable              |
| 14.4. Packing group                | Not Applicable            |                             |
| 14.5. Environmental hazard         | Environmentally hazardous |                             |
| 14.6. Special precautions for user | Special provisions        | 63; 190; 277; 327; 344; 381 |
|                                    | Limited quantity          | 1000ml                      |

Air transport (ICAO-IATA / DGR)

|                                    |                                                           |                |                |
|------------------------------------|-----------------------------------------------------------|----------------|----------------|
| 14.1. UN number                    | 1950                                                      |                |                |
| 14.2. UN proper shipping name      | Aerosols, flammable                                       |                |                |
| 14.3. Transport hazard class(es)   | ICAO/IATA Class                                           | 2.1            |                |
|                                    | ICAO / IATA Subsidiary Hazard                             | Not Applicable |                |
|                                    | ERG Code                                                  | 10L            |                |
| 14.4. Packing group                | Not Applicable                                            |                |                |
| 14.5. Environmental hazard         | Environmentally hazardous                                 |                |                |
| 14.6. Special precautions for user | Special provisions                                        |                | A145 A167 A802 |
|                                    | Cargo Only Packing Instructions                           |                | 203            |
|                                    | Cargo Only Maximum Qty / Pack                             |                | 150 kg         |
|                                    | Passenger and Cargo Packing Instructions                  |                | 203            |
|                                    | Passenger and Cargo Maximum Qty / Pack                    |                | 75 kg          |
|                                    | Passenger and Cargo Limited Quantity Packing Instructions |                | Y203           |
|                                    | Passenger and Cargo Limited Maximum Qty / Pack            |                | 30 kg G        |

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                        |  |
|                                    | IMDG Subsidiary Hazard | Not Applicable             |  |
| 14.4. Packing group                | Not Applicable         |                            |  |
| 14.5 Environmental hazard          | Marine Pollutant       |                            |  |
| 14.6. Special precautions for user | EMS Number             | F-D , S-U                  |  |
|                                    | Special provisions     | 63 190 277 327 344 381 959 |  |
|                                    | Limited Quantities     | 1000 ml                    |  |

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         |
|-------------------------------|---------------|
| zinc powder                   | Not Available |
| toluene                       | Not Available |
| xylene                        | Not Available |
| dioctyl terephthalate         | Not Available |
| LPG (liquefied petroleum gas) | Not Available |

14.7.3. Transport in bulk in accordance with the IGC Code

| Product name | Ship Type     |
|--------------|---------------|
| zinc powder  | Not Available |
| toluene      | Not Available |

| Product name                  | Ship Type     |
|-------------------------------|---------------|
| xylene                        | Not Available |
| dioctyl terephthalate         | Not Available |
| LPG (liquefied petroleum gas) | Not Available |

SECTION 15 Regulatory information

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

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

| HSR Number | Group Standard                         |
|------------|----------------------------------------|
| HSR002515  | Aerosols Flammable Group Standard 2020 |

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

zinc powder is found on the following regulatory lists

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

toluene is found on the following regulatory lists

- Chemical Footprint Project - Chemicals of High Concern List
- International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - 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)

dioctyl terephthalate is found on the following regulatory lists

- International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)
- New Zealand Inventory of Chemicals (NZIoC)
- New Zealand Workplace Exposure Standards (WES)

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 (zinc powder; toluene; xylene; dioctyl terephthalate; LPG (liquefied petroleum gas))                                                                                                                         |
| China - IECSC                                   | Yes                                                                                                                                                                                                             |
| Europe - EINEC / ELINCS / NLP                   | Yes                                                                                                                                                                                                             |
| Japan - ENCS                                    | No (zinc powder)                                                                                                                                                                                                |
| Korea - KECI                                    | Yes                                                                                                                                                                                                             |
| New Zealand - NZIoC                             | Yes                                                                                                                                                                                                             |
| Philippines - PICCS                             | Yes                                                                                                                                                                                                             |
| USA - TSCA                                      | Yes                                                                                                                                                                                                             |
| Taiwan - TCSI                                   | Yes                                                                                                                                                                                                             |
| Mexico - INSQ                                   | Yes                                                                                                                                                                                                             |
| Vietnam - NCI                                   | Yes                                                                                                                                                                                                             |
| Russia - FBEPH                                  | Yes                                                                                                                                                                                                             |
| Legend:                                         | <b>Yes = All CAS declared ingredients are on the inventory</b><br><b>No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.</b> |

SECTION 16 Other information

|               |            |
|---------------|------------|
| Revision Date | 10/03/2023 |
| Initial Date  | 12/11/2001 |

SDS Version Summary

| Version | Date of Update | Sections Updated                                                               |
|---------|----------------|--------------------------------------------------------------------------------|
| 11.1    | 01/11/2019     | One-off system update. NOTE: This may or may not change the GHS classification |
| 12.1    | 10/03/2023     | Classification change due to full database hazard calculation/update.          |

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
- 
- 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

This document is copyright.

Apart from any fair dealing for the purposes of private study, research, review or criticism, as permitted under the Copyright Act, no part may be reproduced by any process without written permission from CHEMWATCH.

TEL (+61 3) 9572 4700.