AEROSOL ALL SURFACES PRIMER

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

Product Identifier

<table>
<thead>
<tr>
<th>Product name</th>
<th>AEROSOL ALL SURFACES PRIMER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Synonyms</td>
<td>ASP</td>
</tr>
<tr>
<td>Proper shipping name</td>
<td>AEROSOLS</td>
</tr>
<tr>
<td>Other means of identification</td>
<td>Not Available</td>
</tr>
</tbody>
</table>

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

Relevant identified uses

- Application is by spray atomisation from a hand held aerosol pack
- Aerosol All Purpose Primer applied by spray onto various surfaces.

Details of the supplier of the safety data sheet

<table>
<thead>
<tr>
<th>Registered company name</th>
<th>HiChem Paint Technologies Pty Ltd</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address</td>
<td>73 Hallam South Road Hallam VIC 3803 Australia</td>
</tr>
<tr>
<td>Telephone</td>
<td>+61 3 9796 3400</td>
</tr>
<tr>
<td>Fax</td>
<td>+61 3 9796 4500</td>
</tr>
<tr>
<td>Website</td>
<td><a href="http://www.hichem.com.au">www.hichem.com.au</a></td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:info@hichem.com.au">info@hichem.com.au</a></td>
</tr>
</tbody>
</table>

Emergency telephone number

<table>
<thead>
<tr>
<th>Association / Organisation</th>
<th>HiChem Paint Technologies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency telephone numbers</td>
<td>In Australia: HiChem: +61 3 9796 3400</td>
</tr>
<tr>
<td>Other emergency telephone numbers</td>
<td>+800 2436 225</td>
</tr>
</tbody>
</table>

CHEMWATCH EMERGENCY RESPONSE

<table>
<thead>
<tr>
<th>Primary Number</th>
<th>Alternative Number 1</th>
<th>Alternative Number 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1800 039 008</td>
<td>1800 039 008</td>
<td>+612 9196 1132</td>
</tr>
</tbody>
</table>

Once connected and if the message is not in your preferred language then please dial 01

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

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

<table>
<thead>
<tr>
<th>CHEMWATCH HAZARD RATINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammability</td>
</tr>
<tr>
<td>Toxicity</td>
</tr>
<tr>
<td>Body Contact</td>
</tr>
<tr>
<td>Reactivity</td>
</tr>
<tr>
<td>Chronic</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Poisons Schedule</th>
<th>Not Applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classification [1]</td>
<td>Aerosols Category 1, Gas under Pressure (Compressed gas), Acute Toxicity (Oral) Category 4, Acute Toxicity (Dermal) Category 4, Acute Toxicity (Inhalation) Category 4, Skin Corrosion/ Irritation Category 2, Eye Irritation Category 2A, Reproductive Toxicity Category 2, Specific target organ toxicity - single exposure Category 3 (respiratory tract irritation), Specific target organ toxicity - single exposure Category 3 (narcotic effects), Specific target organ toxicity - repeated exposure Category 2, Acute Aquatic Hazard Category 3, Chronic Aquatic Hazard Category 3</td>
</tr>
</tbody>
</table>

Continued...
# Label elements

## GHS label elements

<table>
<thead>
<tr>
<th>SIGNAL WORD</th>
<th>DANGER</th>
</tr>
</thead>
</table>

### Hazard statement(s)

- H222: Extremely flammable aerosol.
- H280: Contains gas under pressure; may explode if heated.
- H302: Harmful if swallowed.
- H312: Harmful in contact with skin.
- H322: Harmful if inhaled.
- H315: Causes skin irritation.
- H319: Causes serious eye irritation.
- H361: Suspected of damaging fertility or the unborn child.
- H335: May cause respiratory irritation.
- H336: May cause drowsiness or dizziness.
- H373: May cause damage to organs through prolonged or repeated exposure.
- H412: Harmful to aquatic life with long lasting effects.
- AUH044: Risk of explosion if heated under confinement.

### Precautionary statement(s) Prevention

- P201: Obtain special instructions before use.
- P210: Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- P211: Do not spray on an open flame or other ignition source.
- P251: Pressurized container: Do not pierce or burn, even after use.
- P260: Do not breathe dust/fume/gas/mist/vapours/spray.
- P271: Use only outdoors or in a well-ventilated area.
- P281: Use personal protective equipment as required.
- P270: Do not eat, drink or smoke when using this product.
- P273: Avoid release to the environment.
- P280: Wear protective gloves/protective clothing/eye protection/face protection.

### Precautionary statement(s) Response

- P301+P313: IF EXPOSED OR CONCEALED: Get medical advice/attention.
- P362: Take off contaminated clothing and wash before reuse.
- P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337+P313: IF eye irritation persists: Get medical advice/attention.
- P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
- P302+P352: IF ON SKIN: Wash with plenty of soap and water.
- P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P330: Rinse mouth.
- P332+P313: IF skin irritation occurs: Get medical advice/attention.

### Precautionary statement(s) Storage

- P405: Store locked up.
- P410+P403: Protect from sunlight. Store in a well-ventilated place.
- P410+P412: Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
- P403+P233: Store in a well-ventilated place. Keep container tightly closed.

### Precautionary statement(s) Disposal

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

---

### SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

**Substances**

See section below for composition of Mixtures.

---

*Continued...*
Mixtures

<table>
<thead>
<tr>
<th>CAS No</th>
<th>%[weight]</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>115-10-6</td>
<td>30-&lt;60</td>
<td>dimethyl ether</td>
</tr>
<tr>
<td>Not Available</td>
<td>10-30</td>
<td>Polymeric Synthetic Resins.</td>
</tr>
<tr>
<td>108-88-3</td>
<td>10-&lt;30</td>
<td>toluene</td>
</tr>
<tr>
<td>1330-20-7</td>
<td>1-&lt;10</td>
<td>xylene</td>
</tr>
<tr>
<td>100-41-4</td>
<td>1-&lt;10</td>
<td>styrene</td>
</tr>
<tr>
<td>Not Available</td>
<td>10-&lt;30</td>
<td>Encapsulated Pigments/Extenders.</td>
</tr>
</tbody>
</table>

SECTION 4 FIRST AID MEASURES

Description of first aid measures

Eye Contact
- If aerosols come in contact with the eyes:
  - Immediately hold the eyelids apart and flush the eye continuously for at least 15 minutes with fresh running water.
  - Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
  - Transport to hospital or doctor without delay.
  - Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

Skin Contact
- If solids or aerosol mists are deposited upon the skin:
  - Flush skin and hair with running water (and soap if available).
  - Remove any adhering solids with industrial skin cleansing cream.
  - DO NOT use solvents.
  - Seek medical attention in the event of irritation.

Inhalation
- If aerosols, fumes or combustion products are inhaled:
  - Remove to fresh air.
  - Lay patient down. Keep warm and rested.
  - Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
  - 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.
  - Transport to hospital, or doctor.

Ingestion
- Avoid giving milk or oils.
- Avoid giving alcohol.
- Not considered a normal route of entry.
- If spontaneous vomiting appears imminent or occurs, hold patient’s head down, lower than their hips to help avoid possible aspiration of vomitus.

Indication of any immediate medical attention and special treatment needed
- Treat symptomatically.

SECTION 5 FIREFIGHTING MEASURES

Extinguishing media

SMALL FIRE:
- Water spray, dry chemical or CO2

LARGE FIRE:
- Water spray or fog.

Special hazards arising from the substrate or mixture

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

Advice for firefighters

Fire Fighting
- Alert Fire Brigade and tell them location and nature of hazard.
- May be violently or explosively reactive.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water course.
- If safe, switch off electrical equipment until vapour fire hazard removed.
- Use water delivered as a fine spray to control fire and cool adjacent area.
- DO NOT approach containers suspected to be hot.
- Cool fire exposed containers with water spray from a protected location.
- If safe to do so, remove containers from path of fire.
- Equipment should be thoroughly decontaminated after use.

Fire/Explosion Hazard
- Liquid and vapour are highly flammable.
- Severe fire hazard when exposed to heat or flame.
- Vapour forms an explosive mixture with air.
- Severe explosion hazard, in the form of vapour, when exposed to flame or spark.
- Vapour may travel a considerable distance to source of ignition.
- Heating may cause expansion or decomposition with violent container rupture.
- Aerosol cans may explode on exposure to naked flames.
- Rupturing containers may rocket and scatter burning materials.
- Hazards may not be restricted to pressure effects.
- May emit acid, poisonous or corrosive fumes.
- On combustion, may emit toxic fumes of carbon monoxide (CO).
- Combustion products include: carbon monoxide (CO)
carbon dioxide (CO2)
other pyrolysis products typical of burning organic material.
Contains low boiling substance: Closed containers may rupture due to pressure buildup under fire conditions.

HAZCHEM
Not Applicable

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
See section 8

Environmental precautions
See section 12

Methods and material for containment and cleaning up

Minor Spills
- Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.
- Wear protective clothing, impervious gloves and safety glasses.
- Shut off all possible sources of ignition and increase ventilation.
- Wipe up.
- If safe, damaged cans should be placed in a container outdoors, away from all ignition sources, until pressure has dissipated.
- Undamaged cans should be gathered and stored safely.

Major Spills
- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- May be violently or explosively reactive.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water courses
- No smoking, naked lights or ignition sources.
- Increase ventilation.
- Stop leak if safe to do so.
- Water spray or fog may be used to disperse/absorb vapour.
- Absorb or cover spill with sand, earth, inert materials or vermiculite.
- If safe, damaged cans should be placed in a container outdoors, away from ignition sources, until pressure has dissipated.
- Undamaged cans should be gathered and stored safely.
- Collect residues and seal in labelled drums for disposal.

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

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

Safe handling
- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Prevent concentration in hollows and sumps.
- DO NOT enter confined spaces until atmosphere has been checked.
- Avoid smoking, naked lights or ignition sources.
- Avoid contact with incompatible materials.
- When handling, DO NOT eat, drink, or smoke.
- DO NOT incinerate or puncture aerosol cans.
- DO NOT spray directly on humans, exposed food or food utensils.
- Avoid physical damage to containers.
- Always wash hands with soap and water after handling.
- Work clothes should be laundered separately.
- Use good occupational work practice.
- Observe manufacturer's storage and handling recommendations contained within this SDS.
- Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.

Other information
- Keep dry to avoid corrosion of cans. Corrosion may result in container perforation and internal pressure may eject contents of can.

Conditions for safe storage, including any incompatibilities

Suitable container
- Aerosol dispenser.
- Check that containers are clearly labelled.

Storage incompatibility
- Compressed gases may contain a large amount of kinetic energy over and above that potentially available from the energy of reaction produced by the gas in chemical reaction with other substances.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

<table>
<thead>
<tr>
<th>OCCUPATIONAL EXPOSURE LIMITS (OEL)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INGREDIENT DATA</strong></td>
</tr>
<tr>
<td>Source</td>
</tr>
<tr>
<td>Australia Exposure Standards</td>
</tr>
<tr>
<td>Australia Exposure Standards</td>
</tr>
<tr>
<td>Australia Exposure Standards</td>
</tr>
<tr>
<td>Australia Exposure Standards</td>
</tr>
</tbody>
</table>

| EMERGENCY LIMITS |

Continued...
Exposure controls

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are:

Process controls which involve changing the way a job activity or process is done to reduce the risk.

Enclosure and/or isolation of emission source which keeps a selected hazard “physically” away from the worker and ventilation that strategically “adds” and “removes” air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use. Employers may need to use multiple types of controls to prevent employee overexposure.

General exhaust is adequate under normal conditions. If risk of overexposure exists, wear SAA approved respirator. Correct fit is essential to obtain adequate protection.

Provide adequate ventilation in warehouse or closed storage areas. Air contaminants generated in the workplace possess varying “escape” velocities which, in turn, determine the “capture velocities” of fresh circulating air required to effectively remove the contaminant.

Employers may need to use multiple types of controls to prevent employee overexposure.

Within each range the appropriate value depends on:

- **Lower end of the range**
- **Upper end of the range**

<table>
<thead>
<tr>
<th>Type of Contaminant</th>
<th>Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aerosols, (released at low velocity into zone of active generation)</td>
<td>0.5-1 m/s</td>
</tr>
<tr>
<td>Direct spray, spray painting in shallow booths, gas discharge (active generation into zone of rapid air motion)</td>
<td>1-2.5 m/s (200-500 f/min.)</td>
</tr>
</tbody>
</table>

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min.) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

**Personal protection**
- Safety glasses with side shields.
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lenses should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent]

**Eye and face protection**
- Chemical goggles.
- Safety glasses with side shields.

**Skin protection**
- See Hand protection below

**Hands/feet protection**
- No special equipment needed when handling small quantities.
- **OTHERWISE:**
  - For potentially moderate exposures:
    - Wear general protective gloves, eg. light weight rubber gloves.
  - For potentially heavy exposures:
    - Wear chemical protective gloves, eg. PVC. and safety footwear.

**Body protection**
- See Other protection below

**Other protection**
- No special equipment needed when handling small quantities.
- **OTHERWISE:**
  - Overalls.
  - Skin cleansing cream.
Regarding the AEROSOL ALL SURFACES PRIMER:

**GLOVE SELECTION INDEX**

Glove selection is based on a modified presentation of the “Forsberg Clothing Performance Index”.

**Thermal hazards** Not Available

**Oxidising properties** Not Available

**Explosive properties** Not Available

**Flash point (°C)** Not Available

**Evaporation rate** Not Available

**Smell** Not Available

**Taste** Not Available

**Upper Explosive Limit (%)** 8.0

**Flammability** HIGHLY FLAMMABLE.

**Surface Tension (dyn/cm or mN/m)** Not Available

**Recommended material(s)**

<table>
<thead>
<tr>
<th>Material</th>
<th>CPI</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUTYL</td>
<td>C</td>
</tr>
<tr>
<td>BUTYL/NEOPRENE</td>
<td>C</td>
</tr>
<tr>
<td>CPE</td>
<td>C</td>
</tr>
<tr>
<td>HYPALON</td>
<td>C</td>
</tr>
<tr>
<td>NAT+NEOP+NITRILE</td>
<td>C</td>
</tr>
<tr>
<td>NATURAL+NEOPRENE</td>
<td>C</td>
</tr>
<tr>
<td>NEOPRENE</td>
<td>C</td>
</tr>
<tr>
<td>NEOPRENE-NATURAL</td>
<td>C</td>
</tr>
<tr>
<td>NITRILE</td>
<td>C</td>
</tr>
<tr>
<td>NITRILE+PVC</td>
<td>C</td>
</tr>
<tr>
<td>PE/EVAL/PE</td>
<td>C</td>
</tr>
<tr>
<td>PVA</td>
<td>C</td>
</tr>
<tr>
<td>PVC</td>
<td>C</td>
</tr>
<tr>
<td>PVDC/PE/PVDC</td>
<td>C</td>
</tr>
<tr>
<td>SARANEX-23</td>
<td>C</td>
</tr>
<tr>
<td>SARANEX-23 2-PLY</td>
<td>C</td>
</tr>
<tr>
<td>TEFILON</td>
<td>C</td>
</tr>
<tr>
<td>VITON</td>
<td>C</td>
</tr>
<tr>
<td>VITON/CHLOROBUTYL</td>
<td>C</td>
</tr>
<tr>
<td>VITON/NEOPRENE</td>
<td>C</td>
</tr>
</tbody>
</table>

* 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

**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/particles 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**

<table>
<thead>
<tr>
<th>Protection Factor</th>
<th>Half-Face Respirator</th>
<th>Full-Face Respirator</th>
<th>Powered Air Respirator</th>
</tr>
</thead>
<tbody>
<tr>
<td>up to 5 x ES</td>
<td>AX-AUS / Class 1</td>
<td>-</td>
<td>AX-PAPR-AUS / Class 1</td>
</tr>
<tr>
<td>up to 25 x ES</td>
<td>Air-line*</td>
<td>AX-2</td>
<td>AX-PAPR-2</td>
</tr>
<tr>
<td>up to 50 x ES</td>
<td>-</td>
<td>AX-3</td>
<td>-</td>
</tr>
<tr>
<td>50+ x ES</td>
<td>-</td>
<td>Air-line**</td>
<td>-</td>
</tr>
</tbody>
</table>

* - Continuous-flow; ** - Continuous-flow or positive pressure demand
n - 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 65degC)

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 working 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.

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

**SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES**

**Information on basic physical and chemical properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Coloured aerosol with strong odour; not miscible with water.</td>
</tr>
</tbody>
</table>

**Physical state**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odour</td>
<td>Not Available</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>Not Available</td>
</tr>
<tr>
<td>pH (as supplied)</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Melting point / freezing point (°C)</td>
<td>Not Available</td>
</tr>
<tr>
<td>Initial boiling point and boiling range (°C)</td>
<td>-25-145</td>
</tr>
<tr>
<td>Flash point (°C)</td>
<td>-14</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not Available</td>
</tr>
<tr>
<td>Flammability</td>
<td>HIGHLY FLAMMABLE.</td>
</tr>
</tbody>
</table>

**Relative density (Water = 1)** 0.84

**Partition coefficient n-octanol / water** Not Available

**Auto-ignition temperature (°C)** 230

**Decomposition temperature** Not Available

**Viscosity (cSt)** Not Available

**Molecular weight (g/mol)** Not Applicable

**Taste** Not Available

**Explosive properties** Not Available

**Oxidising properties** Not Available

**Surface Tension (dyn/cm or mN/m)** Not Available
SECTION 10 STABILITY AND REACTIVITY

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower Explosive Limit (%)</td>
<td>1.0</td>
</tr>
<tr>
<td>Vapour pressure (kPa)</td>
<td>Not Available</td>
</tr>
<tr>
<td>Solubility in water (g/L)</td>
<td>Immiscible</td>
</tr>
<tr>
<td>Vapour density (Air = 1)</td>
<td>&gt;1</td>
</tr>
<tr>
<td>Volatile Component (%vol)</td>
<td>64</td>
</tr>
<tr>
<td>Gas group</td>
<td>Not Available</td>
</tr>
<tr>
<td>pH as a solution (%)</td>
<td>Not Available</td>
</tr>
<tr>
<td>VOC g/L</td>
<td>434.7</td>
</tr>
</tbody>
</table>

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

**Inhalation**
- Inhalation of aerosols (mists, fumes), generated by the material during the course of normal handling, may be harmful. The material can cause respiratory irritation in some persons. The body’s response to such irritation can cause further lung damage. 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.
- Inhalation of toxic gases may cause:
  - Central Nervous System effects including depression, headache, confusion, dizziness, stupor, coma and seizures;
  - respiratory: acute lung swellings, shortness of breath, wheezing, rapid breathing, other symptoms and respiratory arrest;
  - cardiovascular: collapse, irregular heartbeats and cardiac arrest;
  - gastrointestinal: irritation, ulcers, nausea and vomiting (may be bloody), and abdominal pain.
- 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.

**Ingestion**
- Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual.
- Not normally a hazard due to physical form of product.
- Considered an unlikely route of entry in commercial/industrial environments.

**Skin Contact**
- Skin contact with the material may be harmful; systemic effects may result following absorption.
- 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.
- Repeated exposure may cause skin cracking, flaking or drying following normal handling and use.
- Spray mist may produce discomfort.
- Open cuts, abraded or irritated skin should not be exposed to this material.
- Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.

**Eye**
- Not considered to be a risk because of the extreme volatility of the gas.
- This material can cause eye irritation and damage in some persons.

**Chronic**
- Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems.
- Harmful: danger of serious damage to health by prolonged exposure through inhalation.
- 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.
- Based on experience with animal studies, exposure to the material may result in toxic effects to the development of the foetus, at levels which do not cause significant toxic effects to the mother.
- Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.

**Warning:** Aerosol containers may present pressure related hazards.

### Table of Toxicity

<table>
<thead>
<tr>
<th>Substance</th>
<th>Toxicity LC50</th>
<th>Irritation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>dimethyl ether</td>
<td>309 mg/L/4hr</td>
<td>Not Available</td>
</tr>
<tr>
<td>toluene</td>
<td>&gt;26700 ppm/1hr</td>
<td>Not Available</td>
</tr>
<tr>
<td>Dermal (rabbit) LD50: 12124 mg/kg</td>
<td>Eye (rabbit): 2mg/24hr - SEVERE</td>
<td></td>
</tr>
<tr>
<td>Inhalation (rat) LC50: 49 mg/L/4hr</td>
<td>Eye (rabbit): 0.87 mg - mild</td>
<td></td>
</tr>
<tr>
<td>Inhalation (rat) LC50: &gt;26700 ppm/1hr</td>
<td>Eye (rabbit):100 mg/30sec - mild</td>
<td></td>
</tr>
</tbody>
</table>
### Toluene

**Acute Toxicity**
Humans exposed to intermediate to high levels of toluene for short periods of time experience adverse central nervous system effects ranging from headaches to intoxication, convulsions, narcosis, and death. Similar effects are observed in short-term animal studies.

**Humans**
- Toluene ingestion or inhalation can result in severe central nervous system depression, and in large doses, can act as a narcotic. The ingestion of about 60 mL resulted in a fatal convulsive episode within 30 minutes in one reported case. Constriction and necrosis of myocardial fibers, markedly swollen liver, congestion and haemorrhage of the lungs and acute tubular necrosis were found on autopsy.
- Central nervous system effects (headaches, dizziness, intoxication) and eye irritation occurred following inhalation exposure to 100 ppm toluene 6 hours/day for 4 days.
- Exposure to 600 ppm for 4 hours resulted in the same and more serious symptoms including euphoria, dilated pupils, convulsions, and nausea. Exposure to 10,000-30,000 ppm has been reported to cause narcosis and death.
- Toluene is also suspected to cause respiratory depression in animals.

**Developmental/Reproductive Toxicity**
- For toluene, fetal weight was reported, but there were no differences in the incidences of skeletal malformations or anomalies between the treated and control offspring.
- In studies with mice exposed to radiolabeled toluene by inhalation, high levels of radioactivity were present in body fat, bone marrow, spinal nerves, spinal cord, and brain white matter. Lower levels of radioactivity were present in blood, kidney, and liver. Accumulation of toluene has generally been found in adipose tissue, other tissues with high fat content, and in highly vascularised tissues.
- Neural and cerebellar dystrophy were reported in several cases of habitual "glue sniffing." An epidemiological study in France on workers chronically exposed to toluene fumes reported leukopenia and neutropenia. Exposure levels were not given in the secondary reference; however, the average urinary excretion of toluene in the workers was 1 g/day.
- To metabolite levels found in adipose tissue, other tissues with high fat content, and in highly vascularised tissues.
- In humans, newborns are born with a higher concentration of toluene in the brain than adults. The effect of toluene on the brain is not known. Studies in animals have shown that toluene can affect the development of the nervous system.

**Ethylbenzene**

**Acute Toxicity**
- Exposure to high levels of ethylbenzene can result in adverse effects in the developing human fetus. Several studies have indicated that high levels of toluene can also adversely affect the developing offspring in laboratory animals.
- Humans - Variable growth, microcephaly, CNS dysfunction, attentional deficits, minor craniofacial and limb abnormalities, and developmental delay were seen in children exposed to toluene in utero as a result of maternal solvent abuse before and during pregnancy.
- Animals - Sternebral alterations, extra ribs, and missing tails were reported following treatment of rats with 1500 mg/m³ toluene 24 hours/day during days 9-14 of gestation. Two of the dams died during the exposure. Another group of rats received 1000 mg/m³ 8 hours/day during days 1-21 of gestation. No maternal deaths or toxicity occurred, however, minor skeletal retardation was present in the exposed fetuses. CFLP Mice were exposed to 500 or 1500 mg/m³ toluene 8 hours/day during days 1-14 of gestation. Two of the dams died during the exposure. Another group of rats received 1000 mg/m³ 8 hours/day during days 1-21 of gestation. No maternal deaths or toxicity occurred, however, minor skeletal retardation was present in the exposed fetuses. CFLP Mice were exposed to 500 or 1500 mg/m³ toluene 8 hours/day during days 1-21 of gestation. No maternal deaths or toxicity occurred, however, minor skeletal retardation was present in the exposed fetuses.

**Developmental/Reproductive Toxicity**
- The major target organs for the subchronic/chronic toxicity of toluene are the nervous system, liver, and kidney. Depressed immune response has been reported in male mice given doses of 105 mg/kg/day for 28 days. Toluene is a known teratogen, and it is suspected to cause birth defects in humans. Toluene is also suspected to cause respiratory depression in animals.

**Ethybenzene**

**Acute Toxicity**
- Exposure to ethylbenzene can result in adverse effects in the developing human fetus. Several studies have indicated that high levels of ethylbenzene can also adversely affect the developing offspring in laboratory animals.
- Humans - Variable growth, microcephaly, CNS dysfunction, attentional deficits, minor craniofacial and limb abnormalities, and developmental delay were seen in children exposed to toluene in utero as a result of maternal solvent abuse before and during pregnancy.
- Animals - Sternebral alterations, extra ribs, and missing tails were reported following treatment of rats with 1500 mg/m³ toluene 24 hours/day during days 9-14 of gestation. Two of the dams died during the exposure. Another group of rats received 1000 mg/m³ 8 hours/day during days 1-21 of gestation. No maternal deaths or toxicity occurred, however, minor skeletal retardation was present in the exposed fetuses. CFLP Mice were exposed to 500 or 1500 mg/m³ toluene 8 hours/day during days 1-21 of gestation. No maternal deaths or toxicity occurred, however, minor skeletal retardation was present in the exposed fetuses. CFLP Mice were exposed to 500 or 1500 mg/m³ toluene 8 hours/day during days 1-21 of gestation. No maternal deaths or toxicity occurred, however, minor skeletal retardation was present in the exposed fetuses.

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- The major target organs for the subchronic/chronic toxicity of toluene are the nervous system, liver, and kidney. Depressed immune response has been reported in male mice given doses of 105 mg/kg/day for 28 days. Toluene is a known teratogen, and it is suspected to cause birth defects in humans. Toluene is also suspected to cause respiratory depression in animals.

**Legend:**
1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2
2. Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances

---

**Table:**

<table>
<thead>
<tr>
<th>Compound</th>
<th>Dermal (rabbit) LD50:</th>
<th>Inhalation (rat) LC50:</th>
<th>Oral (rat) LD50:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xylene</td>
<td>&gt;1700 mg/kg</td>
<td>5000 ppm/2hr</td>
<td>4300 mg/kg</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>CA.15432.6 mg/kg</td>
<td>35.5 mg/L/2hr</td>
<td>3500 mg/kg</td>
</tr>
</tbody>
</table>

**Table of Toxicity:**

<table>
<thead>
<tr>
<th>Compound</th>
<th>Dermal (rabbit) LD50:</th>
<th>Inhalation (rat) LC50:</th>
<th>Oral (rat) LD50:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xylene</td>
<td>CA.15432.6 mg/kg</td>
<td>35.5 mg/L/2hr</td>
<td>3500 mg/kg</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>CA.15432.6 mg/kg</td>
<td>35.5 mg/L/2hr</td>
<td>3500 mg/kg</td>
</tr>
</tbody>
</table>
**WARNING:** This substance has been classified by the IARC as Group 2B: Possibly Carcinogenic to Humans. Liver changes, uterine tract, effects on fertility, foetotoxicity, specific developmental abnormalities (musculoskeletal system) recorded.

**TOLUENE & XYLENE & ETHYLBENZENE**

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.

**XYLENE & ETHYLBENZENE**

The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

### Acute Toxicity

- **Skin Irritation/Corrosion**
- **Carcinogenicity**
- **Reproductivity**
- **Serious Eye Damage/Irritation**
- **STOT - Single Exposure**
- **STOT - Repeated Exposure**
- **Mutagenicity**
- **Aspiration Hazard**

### Persistence and degradability

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Persistence: Water/Soil</th>
<th>Persistence: Air</th>
</tr>
</thead>
<tbody>
<tr>
<td>dimethyl ether</td>
<td>LOW (Half-life = 28 days)</td>
<td>LOW</td>
</tr>
<tr>
<td>toluene</td>
<td>LOW (Half-life = 1.83 days)</td>
<td>LOW (Half-life = 3.57 days)</td>
</tr>
<tr>
<td>xylene</td>
<td>HIGH (Half-life = 228 days)</td>
<td>LOW (Half-life = 3.57 days)</td>
</tr>
<tr>
<td>ethylbenzene</td>
<td>HIGH (Half-life = 228 days)</td>
<td>LOW (Half-life = 3.57 days)</td>
</tr>
</tbody>
</table>

### Bioaccumulative potential

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Bioaccumulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>dimethyl ether</td>
<td>LOW (LogKOW = 0.1)</td>
</tr>
<tr>
<td>toluene</td>
<td>LOW (BCF = 90)</td>
</tr>
</tbody>
</table>

**SECTION 12 ECOLOGICAL INFORMATION**

#### Toxicity

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Endpoint</th>
<th>Test Duration (hr)</th>
<th>Species</th>
<th>Value</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>dimethyl ether</td>
<td>LC50</td>
<td>96</td>
<td>Fish</td>
<td>200.592mg/L</td>
<td>3</td>
</tr>
<tr>
<td>dimethyl ether</td>
<td>EC50</td>
<td>48</td>
<td>Crustacea</td>
<td>&gt;4400.0mg/L</td>
<td>2</td>
</tr>
<tr>
<td>dimethyl ether</td>
<td>EC50</td>
<td>96</td>
<td>Algae or other aquatic plants</td>
<td>1168.058mg/L</td>
<td>3</td>
</tr>
<tr>
<td>dimethyl ether</td>
<td>EC50</td>
<td>384</td>
<td>Crustacea</td>
<td>46.027mg/L</td>
<td>3</td>
</tr>
<tr>
<td>dimethyl ether</td>
<td>NOEC</td>
<td>48</td>
<td>Crustacea</td>
<td>&gt;4000mg/L</td>
<td>1</td>
</tr>
<tr>
<td>toluene</td>
<td>LC50</td>
<td>96</td>
<td>Fish</td>
<td>0.0073mg/L</td>
<td>4</td>
</tr>
<tr>
<td>toluene</td>
<td>EC50</td>
<td>48</td>
<td>Crustacea</td>
<td>3.78mg/L</td>
<td>5</td>
</tr>
<tr>
<td>toluene</td>
<td>EC50</td>
<td>72</td>
<td>Algae or other aquatic plants</td>
<td>12.5mg/L</td>
<td>4</td>
</tr>
<tr>
<td>toluene</td>
<td>BCF</td>
<td>24</td>
<td>Algae or other aquatic plants</td>
<td>10mg/L</td>
<td>4</td>
</tr>
<tr>
<td>toluene</td>
<td>EC50</td>
<td>384</td>
<td>Crustacea</td>
<td>1.533mg/L</td>
<td>3</td>
</tr>
<tr>
<td>toluene</td>
<td>NOEC</td>
<td>168</td>
<td>Crustacea</td>
<td>0.74mg/L</td>
<td>5</td>
</tr>
<tr>
<td>xylene</td>
<td>LC50</td>
<td>96</td>
<td>Fish</td>
<td>2.6mg/L</td>
<td>2</td>
</tr>
<tr>
<td>xylene</td>
<td>EC50</td>
<td>48</td>
<td>Crustacea</td>
<td>&gt;3.4mg/L</td>
<td>2</td>
</tr>
<tr>
<td>xylene</td>
<td>EC50</td>
<td>72</td>
<td>Algae or other aquatic plants</td>
<td>4.6mg/L</td>
<td>2</td>
</tr>
<tr>
<td>xylene</td>
<td>EC50</td>
<td>24</td>
<td>Crustacea</td>
<td>0.711mg/L</td>
<td>4</td>
</tr>
<tr>
<td>xylene</td>
<td>NOEC</td>
<td>73</td>
<td>Algae or other aquatic plants</td>
<td>0.44mg/L</td>
<td>2</td>
</tr>
<tr>
<td>ethylbenzene</td>
<td>LC50</td>
<td>96</td>
<td>Fish</td>
<td>0.0043mg/L</td>
<td>4</td>
</tr>
<tr>
<td>ethylbenzene</td>
<td>EC50</td>
<td>48</td>
<td>Crustacea</td>
<td>1.184mg/L</td>
<td>4</td>
</tr>
<tr>
<td>ethylbenzene</td>
<td>EC50</td>
<td>96</td>
<td>Algae or other aquatic plants</td>
<td>3.6mg/L</td>
<td>2</td>
</tr>
<tr>
<td>ethylbenzene</td>
<td>EC50</td>
<td>96</td>
<td>Crustacea</td>
<td>&gt;0.49mg/L</td>
<td>1</td>
</tr>
<tr>
<td>ethylbenzene</td>
<td>NOEC</td>
<td>168</td>
<td>Crustacea</td>
<td>0.96mg/L</td>
<td>5</td>
</tr>
</tbody>
</table>

**Legend:**

- Data available but does not fill the criteria for classification
- Data required to make classification available
- Data Not Available to make classification

**Harmful 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.

DO NOT discharge into sewer or waterways.

### Bioaccumulative potential

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Bioaccumulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>dimethyl ether</td>
<td>LOW (LogKOW = 0.1)</td>
</tr>
<tr>
<td>toluene</td>
<td>LOW (BCF = 90)</td>
</tr>
</tbody>
</table>
### Mobility in soil

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Mobility (KOC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>dimethyl ether</td>
<td>HIGH (KOC = 1.292)</td>
</tr>
<tr>
<td>toluene</td>
<td>LOW (KOC = 268)</td>
</tr>
<tr>
<td>ethylbenzene</td>
<td>LOW (KOC = 517.8)</td>
</tr>
</tbody>
</table>

### SECTION 13 DISPOSAL CONSIDERATIONS

#### Waste treatment methods

- **DO NOT** allow wash water from cleaning or process equipment to enter drains.
- It may be necessary to collect all wash water for treatment before disposal.
- In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.
- **Consult State Land Waste Management Authority for disposal.**
- **Allow small quantities to evaporate.**
- **DO NOT** incinerate or puncture aerosol cans.
- **Bury residues and emptied aerosol cans at an approved site.**

### SECTION 14 TRANSPORT INFORMATION

#### Labels Required

<table>
<thead>
<tr>
<th>Marine Pollutant</th>
<th>HAZCHEM</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

#### Land transport (ADG)

- **UN number**: 1950
- **UN proper shipping name**: AEROSOLS
- **Transport hazard class(es)**: Class 2.1, Subrisk Not Applicable
- **Packing group**: Not Applicable
- **Environmental hazard**: Not Applicable
- **Special precautions for user**: Special provisions 63 190 277 327 344, Limited quantity 1000ml

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

- **UN number**: 1950
- **UN proper shipping name**: Aerosols, flammable; Aerosols, flammable (engine starting fluid)
- **Transport hazard class(es)**: ICAO/IATA Class 2.1
- **ICAO / IATA Subrisk**: Not Applicable
- **ERG Code**: 10L
- **Packing group**: Not Applicable
- **Environmental hazard**: Not Applicable
- **Special precautions for user**: Special provisions A145A167A802; A1A145A167A802, Cargo Only Packing Instructions 203, Cargo Only Maximum Qty / Pack 150 kg, Passenger and Cargo Packing Instructions 203; Forbidden, Passenger and Cargo Maximum Qty / Pack 75 kg; Forbidden, Passenger and Cargo Limited Quantity Packing Instructions Y203; Forbidden, Passenger and Cargo Limited Maximum Qty / Pack 30 kg G; Forbidden

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

- **UN number**: 1950
UN proper shipping name | AEROSOLS
---|---
Transport hazard class(es) | IMDG Class: 2.1  
| IMDG Subrisk: Not Applicable
Packing group | Not Applicable
Environmental hazard | Not Applicable
Special precautions for user | EMS Number: F-D, S-U  
| Special provisions: 63 190 277 327 344 959  
| Limited Quantities: 1000ml

Transport in bulk according to Annex II of MARPOL and the IBC code
Not Applicable

### SECTION 15 REGULATORY INFORMATION

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

**DIMETHYL ETHER (115-10-6) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

- **Australia Exposure Standards**
- **Australia Hazardous Substances Information System - Consolidated Lists**
- **International Air Transport Association (IATA) Dangerous Goods Regulations - Prohibited List Passenger and Cargo Aircraft**

**TOLUENE (108-88-3) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

- **Australia Exposure Standards**
- **Australia Hazardous Substances Information System - Consolidated Lists**
- **International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs**

**XYLENE (1330-20-7) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

- **Australia Exposure Standards**
- **Australia Hazardous Substances Information System - Consolidated Lists**
- **International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs**

**ETHYLBENZENE (100-41-4) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

- **Australia Exposure Standards**
- **Australia Hazardous Substances Information System - Consolidated Lists**
- **International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs**

**National Inventory**

<table>
<thead>
<tr>
<th>National Inventory</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia - AICS</td>
<td>Y</td>
</tr>
<tr>
<td>Canada - DSL</td>
<td>Y</td>
</tr>
<tr>
<td>Canada - NDSL</td>
<td>N (toluene; xylene; dimethyl ether; ethylbenzene)</td>
</tr>
<tr>
<td>China - IECSC</td>
<td>Y</td>
</tr>
<tr>
<td>Europe - EINEC / ELINCS / NLP</td>
<td>Y</td>
</tr>
<tr>
<td>Japan - ENCS</td>
<td>Y</td>
</tr>
<tr>
<td>Korea - KECI</td>
<td>Y</td>
</tr>
<tr>
<td>New Zealand - NZIoC</td>
<td>Y</td>
</tr>
<tr>
<td>Philippines - PICCS</td>
<td>Y</td>
</tr>
<tr>
<td>USA - TSCA</td>
<td>Y</td>
</tr>
</tbody>
</table>

**Legend:**

- **Y = All ingredients are on the inventory**
- **N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing (see specific ingredients in brackets)**

### SECTION 16 OTHER INFORMATION

**Other information**

**Ingredients with multiple cas numbers**

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS No</th>
</tr>
</thead>
<tbody>
<tr>
<td>dimethyl ether</td>
<td>115-10-6, 157621-61-9</td>
</tr>
</tbody>
</table>

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references. A list of reference resources used to assist the committee may be found at:

[www.chemwatch.net](http://www.chemwatch.net)

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

**Definitions and abbreviations**

- **PC – TWA**: Permissible Concentration-Time Weighted Average

Continued...