



## Subframe Black

HiChem Industries (HiChem Paint Technologies)

Chemwatch: 58-0101

Version No: 2.1.1.1

Safety Data Sheet according to WHS and ADG requirements

Chemwatch Hazard Alert Code: 3

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Initial Date: Not Available

L.GHS.AUS.EN

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

#### Product Identifier

|                               |                                                                                                                                                                                            |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product name                  | Subframe Black                                                                                                                                                                             |
| Synonyms                      | SF                                                                                                                                                                                         |
| Proper shipping name          | PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning or reducing compound) |
| Other means of identification | Not Available                                                                                                                                                                              |

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

|                          |                                                                                                                                                                                                                                                                                                                              |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Relevant identified uses | The use of a quantity of material in an unventilated or confined space may result in increased exposure and an irritating atmosphere developing. Before starting consider control of exposure by mechanical ventilation.<br>Is a quick drying automotive semi-gloss finish applied by spray onto subframe interior surfaces. |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

#### Details of the supplier of the safety data sheet

|                         |                                                |
|-------------------------|------------------------------------------------|
| Registered company name | HiChem Industries (HiChem Paint Technologies)  |
| Address                 | 73 Hallam South Road Hallam 3803 VIC Australia |
| Telephone               | +61 3 9796 3400                                |
| Fax                     | +61 3 9796 4500                                |
| Website                 | www.hichem.com.au                              |
| Email                   | info@hichem.com.au                             |

#### Emergency telephone number

|                                   |               |
|-----------------------------------|---------------|
| Association / Organisation        | Not Available |
| Emergency telephone numbers       | Not Available |
| Other emergency telephone numbers | Not Available |

### SECTION 2 HAZARDS IDENTIFICATION

#### Classification of the substance or mixture

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

#### CHEMWATCH HAZARD RATINGS

|              | Min | Max |
|--------------|-----|-----|
| Flammability | 3   |     |
| Toxicity     | 2   |     |
| Body Contact | 2   |     |
| Reactivity   | 1   |     |
| Chronic      | 2   |     |

0 = Minimum  
1 = Low  
2 = Moderate  
3 = High  
4 = Extreme

|                        |                                                                                                                                                                                                                                                                                        |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Poisons Schedule       | S5                                                                                                                                                                                                                                                                                     |
| GHS Classification [1] | Flammable Liquid Category 1, Acute Toxicity (Dermal) Category 4, Skin Corrosion/Irritation Category 2, Carcinogen Category 2, Reproductive Toxicity Category 2, STOT - SE (Narcosis) Category 3, STOT - RE Category 2, Aspiration Hazard Category 1, Chronic Aquatic Hazard Category 3 |
| Legend:                | 1. Classified by Chemwatch; 2. Classification drawn from HSIS; 3. Classification drawn from EC Directive 1272/2008 - Annex VI                                                                                                                                                          |

#### Label elements

Continued...

## Subframe Black

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

|             |               |
|-------------|---------------|
| SIGNAL WORD | <b>DANGER</b> |
|-------------|---------------|

## Hazard statement(s)

|      |                                                                   |
|------|-------------------------------------------------------------------|
| H224 | Extremely flammable liquid and vapour                             |
| H312 | Harmful in contact with skin                                      |
| H315 | Causes skin irritation                                            |
| H351 | Suspected of causing cancer                                       |
| H361 | Suspected of damaging fertility or the unborn child               |
| H336 | May cause drowsiness or dizziness                                 |
| H373 | May cause damage to organs through prolonged or repeated exposure |
| H304 | May be fatal if swallowed and enters airways                      |
| H412 | Harmful to aquatic life with long lasting effects                 |

## Precautionary statement(s) Prevention

|      |                                                                                                |
|------|------------------------------------------------------------------------------------------------|
| P201 | Obtain special instructions before use.                                                        |
| P210 | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. |
| 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.                                                 |
| P240 | Ground/bond container and receiving equipment.                                                 |
| P241 | Use explosion-proof electrical/ventilating/lighting/intrinsically safe equipment.              |
| P242 | Use only non-sparking tools.                                                                   |
| P243 | Take precautionary measures against static discharge.                                          |
| P273 | Avoid release to the environment.                                                              |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection.                     |

## Precautionary statement(s) Response

|                |                                                                                                     |
|----------------|-----------------------------------------------------------------------------------------------------|
| P301+P310      | IF SWALLOWED: Immediately call a POISON CENTER/doctor/physician/first aider                         |
| P308+P313      | IF exposed or concerned: Get medical advice/attention.                                              |
| P331           | Do NOT induce vomiting.                                                                             |
| P362           | Take off contaminated clothing.                                                                     |
| P363           | Wash contaminated clothing before reuse.                                                            |
| P370+P378      | In case of fire: Use alcohol resistant foam or normal protein foam for extinction.                  |
| P312           | Call a POISON CENTER/doctor/physician/first aider/if you feel unwell.                               |
| P302+P352      | IF ON SKIN: Wash with plenty of water and soap                                                      |
| P303+P361+P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. |
| P304+P340      | IF INHALED: Remove person to fresh air and keep comfortable for breathing.                          |
| P332+P313      | If skin irritation occurs: Get medical advice/attention.                                            |

## Precautionary statement(s) Storage

|           |                                                                  |
|-----------|------------------------------------------------------------------|
| P403+P235 | Store in a well-ventilated place. Keep cool.                     |
| P405      | Store locked up.                                                 |
| 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

## Mixtures

| CAS No      | %[weight] | Name                                              |
|-------------|-----------|---------------------------------------------------|
| 64742-89-8. | 31-35     | <u>naphtha petroleum, light aliphatic solvent</u> |

Continued...

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|               |       |                            |
|---------------|-------|----------------------------|
| 8052-41-3     | 21-24 | <u>white spirit</u>        |
| Not Available | 24-27 | Polymeric Synthetic Resins |
| 110-54-3      | 13-17 | <u>n-hexane</u>            |
| 1333-86-4     | 1-2   | <u>carbon black</u>        |

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

## SECTION 4 FIRST AID MEASURES

## Description of first aid measures

|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Eye Contact</b>  | <p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> <li>▶ Wash out immediately 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>▶ Seek medical attention without delay; if pain persists or recurs seek medical attention.</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 skin contact occurs:</p> <ul style="list-style-type: none"> <li>▶ Immediately remove all contaminated clothing, including footwear.</li> <li>▶ Flush skin and hair with running water (and soap if available).</li> <li>▶ Seek medical attention in event of irritation.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Inhalation</b>   | <ul style="list-style-type: none"> <li>▶ If fumes or combustion products are inhaled remove from contaminated area.</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>▶ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.</li> <li>▶ Transport to hospital, or doctor.</li> </ul>                                                                                                                                                                                                                                                          |
| <b>Ingestion</b>    | <ul style="list-style-type: none"> <li>▶ <b>If swallowed do NOT induce vomiting.</b></li> <li>▶ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.</li> <li>▶ Observe the patient carefully.</li> <li>▶ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.</li> <li>▶ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.</li> <li>▶ Seek medical advice.</li> <li>▶ Avoid giving milk or oils.</li> <li>▶ Avoid giving alcohol.</li> <li>▶ If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus.</li> </ul> |

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

For acute or short term repeated exposures to petroleum distillates or related hydrocarbons:

- ▶ Primary threat to life, from pure petroleum distillate 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) 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.
- ▶ Lavage is indicated in patients who require decontamination; ensure use of cuffed endotracheal tube in adult patients. [Ellenhorn and Barceloux: Medical Toxicology]

Any material aspirated during vomiting may produce lung injury. Therefore emesis should not be induced mechanically or pharmacologically. Mechanical means should be used if it is considered necessary to evacuate the stomach contents; these include gastric lavage after endotracheal intubation. If spontaneous vomiting has occurred after ingestion, the patient should be monitored for difficult breathing, as adverse effects of aspiration into the lungs may be delayed up to 48 hours.

Treat symptomatically.

## SECTION 5 FIREFIGHTING MEASURES

## Extinguishing media

|  |                                                                                                                                                                                                                   |
|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <ul style="list-style-type: none"> <li>▶ Foam.</li> <li>▶ Dry chemical powder.</li> <li>▶ BCF (where regulations permit).</li> <li>▶ Carbon dioxide.</li> <li>▶ Water spray or fog - Large fires only.</li> </ul> |
|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## Special hazards arising from the substrate or mixture

|                             |                                                                                                                                          |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Fire Incompatibility</b> | ▶ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------|

## 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 in the event of a fire.</li> <li>▶ Prevent, by any means available, spillage from entering drains or water course.</li> <li>▶ Consider evacuation (or protect in place).</li> <li>▶ Fight fire from a safe distance, with adequate cover.</li> <li>▶ If safe, switch off electrical equipment until vapour fire hazard removed.</li> <li>▶ Use water delivered as a fine spray to control the fire and cool adjacent area.</li> <li>▶ Avoid spraying water onto liquid pools.</li> <li>▶ <b>Do not approach containers suspected to be hot.</b></li> <li>▶ Cool fire exposed containers with water spray from a protected location.</li> <li>▶ If safe to do so, remove containers from path of fire.</li> </ul> |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

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## Fire/Explosion Hazard

- ▶ Liquid and vapour are highly flammable.
  - ▶ Severe fire hazard when exposed to heat, flame and/or oxidisers.
  - ▶ Vapour may travel a considerable distance to source of ignition.
  - ▶ Heating may cause expansion or decomposition leading to violent rupture of containers.
  - ▶ On combustion, may emit toxic fumes of carbon monoxide (CO).
- Combustion products include: carbon dioxide (CO<sub>2</sub>) other pyrolysis products typical of burning organic material. **Contains low boiling substance:** Closed containers may rupture due to pressure buildup under fire conditions. May emit clouds of acrid smoke

## SECTION 6 ACCIDENTAL RELEASE MEASURES

## Personal precautions, protective equipment and emergency procedures

## Minor Spills

- ▶ Remove all ignition sources.
- ▶ Clean up all spills immediately.
- ▶ Avoid breathing vapours and contact with skin and eyes.
- ▶ Control personal contact with the substance, by using protective equipment.
- ▶ Contain and absorb small quantities with vermiculite or other absorbent material.
- ▶ Wipe up.
- ▶ Collect residues in a flammable waste container.

Chemical Class: aliphatic hydrocarbons  
For release onto land: recommended sorbents listed in order of priority.

| SORBENT TYPE | RANK | APPLICATION | COLLECTION | LIMITATIONS |
|--------------|------|-------------|------------|-------------|
|--------------|------|-------------|------------|-------------|

## LAND SPILL - SMALL

|                                    |   |        |           |               |
|------------------------------------|---|--------|-----------|---------------|
| cross-linked polymer - particulate | 1 | shovel | shovel    | R, W, SS      |
| cross-linked polymer - pillow      | 1 | throw  | pitchfork | R, DGC, RT    |
| wood fiber - pillow                | 2 | throw  | pitchfork | R, P, DGC, RT |
| treated wood fibre- pillow         | 2 | throw  | pitchfork | DGC, RT       |
| sorbent clay - particulate         | 3 | shovel | shovel    | R, I, P       |
| foamed glass - pillow              | 3 | throw  | pitchfork | R, P, DGC, RT |

## LAND SPILL - MEDIUM

|                                    |   |        |            |                 |
|------------------------------------|---|--------|------------|-----------------|
| cross-linked polymer - particulate | 1 | blower | skiploader | R,W, SS         |
| cross-linked polymer - pillow      | 2 | throw  | skiploader | R, DGC, RT      |
| sorbent clay - particulate         | 3 | blower | skiploader | R, I, P         |
| polypropylene - particulate        | 3 | blower | skiploader | W, SS, DGC      |
| expanded mineral - particulate     | 4 | blower | skiploader | R, I, W, P, DGC |
| polypropylene - mat                | 4 | throw  | skiploader | DGC, RT         |

## Legend

DGC: Not effective where ground cover is dense

R: Not reusable

I: Not incinerable

P: Effectiveness reduced when rainy

RT: Not effective where terrain is rugged

SS: Not for use within environmentally sensitive sites

W: Effectiveness reduced when windy

Reference: Sorbents for Liquid Hazardous Substance Cleanup and Control;

R.W Melvold et al: Pollution Technology Review No. 150: Noyes Data Corporation 1988

- ▶ 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 course.
- ▶ Consider evacuation (or protect in place).
- ▶ 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.
- ▶ Contain spill with sand, earth or vermiculite.
- ▶ Use only spark-free shovels and explosion proof equipment.
- ▶ Collect recoverable product into labelled containers for recycling.
- ▶ Absorb remaining product with sand, earth or vermiculite.
- ▶ Collect solid residues and seal in labelled drums for disposal.
- ▶ Wash area and prevent runoff into drains.
- ▶ If contamination of drains or waterways occurs, advise emergency services.

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

## SECTION 7 HANDLING AND STORAGE

## Precautions for safe handling

## Safe handling

The conductivity of this material may make it a static accumulator., A liquid is typically considered nonconductive if its conductivity is below 100 pS/m and is considered semi-conductive if its conductivity is below 10 000 pS/m., Whether a liquid is nonconductive or semi-conductive, the precautions are the same., A

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                   | <p>number of factors, for example liquid temperature, presence of contaminants, and anti-static additives can greatly influence the conductivity of a liquid.</p> <ul style="list-style-type: none"> <li>Containers, even those that have been emptied, may contain explosive vapours.</li> <li>Do NOT cut, drill, grind, weld or perform similar operations on or near containers.</li> </ul> <p><b>Contains low boiling substance:</b></p> <p>Storage in sealed containers may result in pressure buildup causing violent rupture of containers not rated appropriately.</p> <ul style="list-style-type: none"> <li>Check for bulging containers.</li> <li>Vent periodically</li> <li>Always release caps or seals slowly to ensure slow dissipation of vapours</li> <li><b>DO NOT allow clothing wet with material to stay in contact with skin</b></li> <li>Electrostatic discharge may be generated during pumping - this may result in fire.</li> <li>Ensure electrical continuity by bonding and grounding (earthing) all equipment.</li> <li>Restrict line velocity during pumping in order to avoid generation of electrostatic discharge (<math>\leq 1</math> m/sec until fill pipe submerged to twice its diameter, then <math>\leq 7</math> m/sec).</li> <li>Avoid splash filling.</li> <li>Do NOT use compressed air for filling discharging or handling operations.</li> <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> <li><b>DO NOT enter confined spaces until atmosphere has been checked.</b></li> <li>Avoid smoking, naked lights, heat or ignition sources.</li> <li>When handling, <b>DO NOT eat, drink or smoke.</b></li> <li>Vapour may ignite on pumping or pouring due to static electricity.</li> <li><b>DO NOT use plastic buckets.</b></li> <li>Earth and secure metal containers when dispensing or pouring product.</li> <li>Use spark-free tools when handling.</li> <li>Avoid contact with incompatible materials.</li> <li>Keep containers securely sealed.</li> <li>Avoid physical damage to containers.</li> <li>Always wash hands with soap and water after handling.</li> <li>Work clothes should be laundered separately.</li> <li>Use good occupational work practice.</li> <li>Observe manufacturer's storage and handling recommendations contained within this MSDS.</li> <li>Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions.</li> </ul> |
| Other information | <ul style="list-style-type: none"> <li>Store in original containers in approved flame-proof area.</li> <li>No smoking, naked lights, heat or ignition sources.</li> <li><b>DO NOT store in pits, depressions, basements or areas where vapours may be trapped.</b></li> <li>Keep containers securely sealed.</li> <li>Store away from incompatible materials in a cool, dry well ventilated area.</li> <li>Protect containers against physical damage and check regularly for leaks.</li> <li>Observe manufacturer's storage and handling recommendations contained within this MSDS.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

#### Conditions for safe storage, including any incompatibilities

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Suitable container      | <ul style="list-style-type: none"> <li>Packing as supplied by manufacturer.</li> <li>Plastic containers may only be used if approved for flammable liquid.</li> <li>Check that containers are clearly labelled and free from leaks.</li> <li>For low viscosity materials (i) : Drums and jerry cans must be of the non-removable head type. (ii) : Where a can is to be used as an inner package, the can must have a screwed enclosure.</li> <li>For materials with a viscosity of at least 2680 cSt. (23 deg. C)</li> <li>For manufactured product having a viscosity of at least 250 cSt. (23 deg. C)</li> <li>Manufactured product that requires stirring before use and having a viscosity of at least 20 cSt (25 deg. C): (i) Removable head packaging; (ii) Cans with friction closures and (iii) low pressure tubes and cartridges may be used.</li> <li>Where combination packages are used, and the inner packages are of glass, there must be sufficient inert cushioning material in contact with inner and outer packages</li> <li>In addition, where inner packagings are glass and contain liquids of packing group I there must be sufficient inert absorbent to absorb any spillage, unless the outer packaging is a close fitting moulded plastic box and the substances are not incompatible with the plastic.</li> </ul> |
| Storage incompatibility | <ul style="list-style-type: none"> <li>Avoid reaction with oxidising agents</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

## SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

### Control parameters

#### OCCUPATIONAL EXPOSURE LIMITS (OEL)

#### INGREDIENT DATA

| Source                       | Ingredient   | Material name     | TWA               | STEL          | Peak          | Notes         |
|------------------------------|--------------|-------------------|-------------------|---------------|---------------|---------------|
| Australia Exposure Standards | white spirit | White spirits     | 790 mg/m3         | Not Available | Not Available | Not Available |
| Australia Exposure Standards | n-hexane     | Hexane (n-Hexane) | 72 mg/m3 / 20 ppm | Not Available | Not Available | Not Available |
| Australia Exposure Standards | carbon black | Carbon black      | 3 mg/m3           | Not Available | Not Available | Not Available |

#### EMERGENCY LIMITS

| Ingredient                                 | Material name                                                                | TEEL-1     | TEEL-2    | TEEL-3    |
|--------------------------------------------|------------------------------------------------------------------------------|------------|-----------|-----------|
| naphtha petroleum, light aliphatic solvent | Rubber solvent; (Naphtha (petroleum) light aliphatic)                        | 264 ppm    | 1700 ppm  | 10000 ppm |
| white spirit                               | Naphtha, hydrotreated heavy; (Isopar L-rev 2)                                | 171 ppm    | 171 ppm   | 570 ppm   |
| white spirit                               | Solvent naphtha, petroleum, medium aliphatic; (Mineral spirits, naphtha)     | 0.32 mg/m3 | 3.5 mg/m3 | 21 mg/m3  |
| white spirit                               | Rubber solvent; (Naphtha (petroleum) light aliphatic)                        | 264 ppm    | 1700 ppm  | 10000 ppm |
| white spirit                               | Petroleum distillates; (Petroleum crude oil)                                 | 87.5 ppm   | 450 ppm   | 10000 ppm |
| white spirit                               | Naphtha (coal tar); (Naphtha [petroleum] light aliphatic; Aliphatic naphtha) | 300 ppm    | 1700 ppm  | 10000 ppm |

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|              |                                                                           |          |               |               |
|--------------|---------------------------------------------------------------------------|----------|---------------|---------------|
| white spirit | Petroleum spirits; (VM & P Naphtha, Ligroine, Paint solvent)              | 75 ppm   | 400 ppm       | 400 ppm       |
| white spirit | Mineral oil, white                                                        | 15 mg/m3 | 82 mg/m3      | 490 mg/m3     |
| white spirit | Stoddard solvent; (Mineral spirits, 85% nonane and 15% trimethyl benzene) | 100 ppm  | 350 ppm       | 29500 ppm     |
| n-hexane     | Hexane                                                                    | 300 ppm  | Not Available | Not Available |
| carbon black | Carbon black                                                              | 9 mg/m3  | 99 mg/m3      | 590 mg/m3     |

| Ingredient                                 | Original IDLH                                | Revised IDLH                                     |
|--------------------------------------------|----------------------------------------------|--------------------------------------------------|
| naphtha petroleum, light aliphatic solvent | Not Available                                | Not Available                                    |
| white spirit                               | 29,500 mg/m3 / 10,000 ppm / 10,000 [LEL] ppm | 20,000 mg/m3 / 1,100 [LEL] ppm / 1,000 [LEL] ppm |
| Polymeric Synthetic Resins                 | Not Available                                | Not Available                                    |
| n-hexane                                   | 5,000 ppm                                    | 1,100 [LEL] ppm                                  |
| carbon black                               | N.E. mg/m3 / N.E. ppm                        | 1,750 mg/m3                                      |

## MATERIAL DATA

NOTE M: The classification as a carcinogen need not apply if it can be shown that the substance contains less than 0.005% w/w benzo[a]pyrene (EINECS No 200-028-5). This note applies only to certain complex oil-derived substances in Annex IV.

European Union (EU) List of harmonised classification and labelling hazardous substances, Table 3.1, Annex VI, Regulation (EC) No 1272/2008 (CLP) - up to the latest ATP

NOTE P: The classification as a carcinogen need not apply if it can be shown that the substance contains less than 0.01% w/w benzene (EINECS No 200-753-7). Note E shall also apply when the substance is classified as a carcinogen. This note applies only to certain complex oil-derived substances in Annex VI.

European Union (EU) List of harmonised classification and labelling hazardous substances, Table 3.1, Annex VI, Regulation (EC) No 1272/2008 (CLP) - up to the latest ATP

## Exposure controls

| Appropriate engineering controls                                                                                                                                                                                    | <p>Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.</p> <p>The basic types of engineering controls are:</p> <p>Process controls which involve changing the way a job activity or process is done to reduce the risk.</p> <p>Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use.</p> <p>Employers may need to use multiple types of controls to prevent employee overexposure.</p> <p>For flammable liquids and flammable gases, local exhaust ventilation or a process enclosure ventilation system may be required. Ventilation equipment should be explosion-resistant.</p> <p>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.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                      |            |                                                                          |                                 |                                                                                                                                                                                                                     |                               |                                                                                                                                                                |                               |                        |                        |                                                       |                                 |                                                            |                                  |                                  |                               |                                           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|------------|--------------------------------------------------------------------------|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|------------------------|------------------------|-------------------------------------------------------|---------------------------------|------------------------------------------------------------|----------------------------------|----------------------------------|-------------------------------|-------------------------------------------|
|                                                                                                                                                                                                                     | <table border="1"> <thead> <tr> <th>Type of Contaminant:</th> <th>Air Speed:</th> </tr> </thead> <tbody> <tr> <td>solvent, vapours, degreasing etc., evaporating from tank (in still air).</td> <td>0.25-0.5 m/s<br/>(50-100 f/min.)</td> </tr> <tr> <td>aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)</td> <td>0.5-1 m/s<br/>(100-200 f/min.)</td> </tr> <tr> <td>direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)</td> <td>1-2.5 m/s<br/>(200-500 f/min.)</td> </tr> </tbody> </table> <p>Within each range the appropriate value depends on:</p> <table border="1"> <thead> <tr> <th>Lower end of the range</th> <th>Upper end of the range</th> </tr> </thead> <tbody> <tr> <td>1: Room air currents minimal or favourable to capture</td> <td>1: Disturbing room air currents</td> </tr> <tr> <td>2: Contaminants of low toxicity or of nuisance value only.</td> <td>2: Contaminants of high toxicity</td> </tr> <tr> <td>3: Intermittent, low production.</td> <td>3: High production, heavy use</td> </tr> <tr> <td>4: Large hood or large air mass in motion</td> <td>4: Small hood-local control only</td> </tr> </tbody> </table> <p>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.</p> | Type of Contaminant: | Air Speed: | solvent, vapours, degreasing etc., evaporating from tank (in still air). | 0.25-0.5 m/s<br>(50-100 f/min.) | aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation) | 0.5-1 m/s<br>(100-200 f/min.) | direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion) | 1-2.5 m/s<br>(200-500 f/min.) | Lower end of the range | Upper end of the range | 1: Room air currents minimal or favourable to capture | 1: Disturbing room air currents | 2: Contaminants of low toxicity or of nuisance value only. | 2: Contaminants of high toxicity | 3: Intermittent, low production. | 3: High production, heavy use | 4: Large hood or large air mass in motion |
| Type of Contaminant:                                                                                                                                                                                                | Air Speed:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |            |                                                                          |                                 |                                                                                                                                                                                                                     |                               |                                                                                                                                                                |                               |                        |                        |                                                       |                                 |                                                            |                                  |                                  |                               |                                           |
| solvent, vapours, degreasing etc., evaporating from tank (in still air).                                                                                                                                            | 0.25-0.5 m/s<br>(50-100 f/min.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                      |            |                                                                          |                                 |                                                                                                                                                                                                                     |                               |                                                                                                                                                                |                               |                        |                        |                                                       |                                 |                                                            |                                  |                                  |                               |                                           |
| aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation) | 0.5-1 m/s<br>(100-200 f/min.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                      |            |                                                                          |                                 |                                                                                                                                                                                                                     |                               |                                                                                                                                                                |                               |                        |                        |                                                       |                                 |                                                            |                                  |                                  |                               |                                           |
| direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)                                                      | 1-2.5 m/s<br>(200-500 f/min.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                      |            |                                                                          |                                 |                                                                                                                                                                                                                     |                               |                                                                                                                                                                |                               |                        |                        |                                                       |                                 |                                                            |                                  |                                  |                               |                                           |
| Lower end of the range                                                                                                                                                                                              | Upper end of the range                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                      |            |                                                                          |                                 |                                                                                                                                                                                                                     |                               |                                                                                                                                                                |                               |                        |                        |                                                       |                                 |                                                            |                                  |                                  |                               |                                           |
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| 2: Contaminants of low toxicity or of nuisance value only.                                                                                                                                                          | 2: Contaminants of high toxicity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |            |                                                                          |                                 |                                                                                                                                                                                                                     |                               |                                                                                                                                                                |                               |                        |                        |                                                       |                                 |                                                            |                                  |                                  |                               |                                           |
| 3: Intermittent, low production.                                                                                                                                                                                    | 3: High production, heavy use                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                      |            |                                                                          |                                 |                                                                                                                                                                                                                     |                               |                                                                                                                                                                |                               |                        |                        |                                                       |                                 |                                                            |                                  |                                  |                               |                                           |
| 4: Large hood or large air mass in motion                                                                                                                                                                           | 4: Small hood-local control only                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |            |                                                                          |                                 |                                                                                                                                                                                                                     |                               |                                                                                                                                                                |                               |                        |                        |                                                       |                                 |                                                            |                                  |                                  |                               |                                           |
| Personal protection                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                      |            |                                                                          |                                 |                                                                                                                                                                                                                     |                               |                                                                                                                                                                |                               |                        |                        |                                                       |                                 |                                                            |                                  |                                  |                               |                                           |
| Eye and face protection                                                                                                                                                                                             | <ul style="list-style-type: none"> <li>▶ Safety glasses with side shields.</li> <li>▶ Chemical goggles.</li> <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. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent]</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                      |            |                                                                          |                                 |                                                                                                                                                                                                                     |                               |                                                                                                                                                                |                               |                        |                        |                                                       |                                 |                                                            |                                  |                                  |                               |                                           |

## Subframe Black

|                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Skin protection</b>       | See Hand protection below                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Hands/feet protection</b> | <ul style="list-style-type: none"> <li>▶ Wear chemical protective gloves, e.g. PVC.</li> <li>▶ Wear safety footwear or safety gumboots, e.g. Rubber</li> </ul> <p>The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.</p> <p>The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.</p> <p>Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include:</p> <ul style="list-style-type: none"> <li>▶ frequency and duration of contact,</li> <li>▶ chemical resistance of glove material,</li> <li>▶ glove thickness and</li> <li>▶ dexterity</li> </ul> <p>Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739, AS/NZS 2161.1 or national equivalent).</p> <ul style="list-style-type: none"> <li>▶ When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.</li> <li>▶ When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.</li> <li>▶ Some glove polymer types are less affected by movement and this should be taken into account when considering gloves for long-term use.</li> <li>▶ Contaminated gloves should be replaced.</li> </ul> <p>Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.</p> |
| <b>Body protection</b>       | See Other protection below                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Other protection</b>      | <ul style="list-style-type: none"> <li>▶ Overalls.</li> <li>▶ PVC Apron.</li> <li>▶ PVC protective suit may be required if exposure severe.</li> <li>▶ Eyewash unit.</li> <li>▶ Ensure there is ready access to a safety shower.</li> </ul> <p>Some plastic personal protective equipment (PPE) (e.g. gloves, aprons, overshoes) are not recommended as they may produce static electricity.</p> <p>For large scale or continuous use wear tight-weave non-static clothing (no metallic fasteners, cuffs or pockets).</p> <p>Non sparking safety or conductive footwear should be considered. Conductive footwear describes a boot or shoe with a sole made from a conductive compound chemically bound to the bottom components, for permanent control to electrically ground the foot an shall dissipate static electricity from the body to reduce the possibility of ignition of volatile compounds. Electrical resistance must range between 0 to 500,000 ohms. Conductive shoes should be stored in lockers close to the room in which they are worn. Personnel who have been issued conductive footwear should not wear them from their place of work to their homes and return.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Thermal hazards</b>       | Not Available                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

## Recommended material(s)

## GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the:

**"Forsberg Clothing Performance Index".**

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

Subframe Black

| Material          | CPI |
|-------------------|-----|
| BUTYL             | C   |
| NEOPRENE          | C   |
| NEOPRENE/NATURAL  | C   |
| NITRILE           | C   |
| NITRILE+PVC       | C   |
| PE/EVAL/PE        | C   |
| PVA               | C   |
| PVC               | C   |
| SARANEX-23 2-PLY  | C   |
| TEFLON            | C   |
| VITON             | C   |
| VITON/CHLOROBUTYL | 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-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required.

Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

| Required Minimum Protection Factor | Half-Face Respirator | Full-Face Respirator | Powered Air Respirator   |
|------------------------------------|----------------------|----------------------|--------------------------|
| up to 5 x ES                       | AX-AUS / Class 1 P2  | -                    | AX-PAPR-AUS / Class 1 P2 |
| up to 25 x ES                      | Air-line*            | AX-2 P2              | AX-PAPR-2 P2             |
| up to 50 x ES                      | -                    | AX-3 P2              | -                        |
| 50+ x ES                           | -                    | Air-line**           | -                        |

^ - Full-face

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO<sub>2</sub>), G = Agricultural chemicals, K = Ammonia(NH<sub>3</sub>), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

## Information on basic physical and chemical properties

|                       |                                                                            |                                     |      |
|-----------------------|----------------------------------------------------------------------------|-------------------------------------|------|
| <b>Appearance</b>     | Coloured highly flammable liquid with mild odour; not miscible with water. |                                     |      |
| <b>Physical state</b> | Liquid                                                                     | <b>Relative density (Water = 1)</b> | 0.83 |

Continued...

## Subframe Black

|                                                     |                   |                                                |                |
|-----------------------------------------------------|-------------------|------------------------------------------------|----------------|
| <b>Odour</b>                                        | Not Available     | <b>Partition coefficient n-octanol / water</b> | Not Available  |
| <b>Odour threshold</b>                              | Not Available     | <b>Auto-ignition temperature (°C)</b>          | 240            |
| <b>pH (as supplied)</b>                             | Not Applicable    | <b>Decomposition temperature</b>               | Not Available  |
| <b>Melting point / freezing point (°C)</b>          | Not Available     | <b>Viscosity (cSt)</b>                         | Not Available  |
| <b>Initial boiling point and boiling range (°C)</b> | -5 -180           | <b>Molecular weight (g/mol)</b>                | Not Applicable |
| <b>Flash point (°C)</b>                             | -5                | <b>Taste</b>                                   | Not Available  |
| <b>Evaporation rate</b>                             | Not Available     | <b>Explosive properties</b>                    | Not Available  |
| <b>Flammability</b>                                 | HIGHLY FLAMMABLE. | <b>Oxidising properties</b>                    | Not Available  |
| <b>Upper Explosive Limit (%)</b>                    | 8.0               | <b>Surface Tension (dyn/cm or mN/m)</b>        | Not Available  |
| <b>Lower Explosive Limit (%)</b>                    | 1.0               | <b>Volatile Component (%vol)</b>               | 81             |
| <b>Vapour pressure (kPa)</b>                        | Not Available     | <b>Gas group</b>                               | Not Available  |
| <b>Solubility in water (g/L)</b>                    | Immiscible        | <b>pH as a solution (1%)</b>                   | Not Available  |
| <b>Vapour density (Air = 1)</b>                     | >1                | <b>VOC g/L</b>                                 | Not Available  |

## SECTION 10 STABILITY AND REACTIVITY

|                                           |                                                                                                                                                                                                      |
|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Reactivity</b>                         | See section 7                                                                                                                                                                                        |
| <b>Chemical stability</b>                 | <ul style="list-style-type: none"> <li>▶ Unstable in the presence of incompatible materials.</li> <li>▶ Product is considered stable.</li> <li>▶ Hazardous polymerisation will not occur.</li> </ul> |
| <b>Possibility of hazardous reactions</b> | See section 7                                                                                                                                                                                        |
| <b>Conditions to avoid</b>                | See section 7                                                                                                                                                                                        |
| <b>Incompatible materials</b>             | See section 7                                                                                                                                                                                        |
| <b>Hazardous decomposition products</b>   | See section 5                                                                                                                                                                                        |

## SECTION 11 TOXICOLOGICAL INFORMATION

## Information on toxicological effects

|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Inhaled</b>   | <p>Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by narcosis, reduced alertness, loss of reflexes, lack of coordination and vertigo.</p> <p>Limited evidence or practical experience suggests that the material may produce irritation of the respiratory system, in a significant number of individuals, following inhalation. In contrast to most organs, the lung is able to respond to a chemical insult by first removing or neutralising the irritant and then repairing the damage. The repair process, which initially evolved to protect mammalian lungs from foreign matter and antigens, may however, produce further lung damage resulting in the impairment of gas exchange, the primary function of the lungs. Respiratory tract irritation often results in an inflammatory response involving the recruitment and activation of many cell types, mainly derived from the vascular system.</p> <p>Inhalation hazard is increased at higher temperatures.</p> <p>High inhaled concentrations of mixed hydrocarbons may produce narcosis characterised by nausea, vomiting and lightheadedness. Inhalation of aerosols may produce severe pulmonary oedema, pneumonitis and pulmonary haemorrhage. Inhalation of petroleum hydrocarbons consisting substantially of low molecular weight species (typically C2-C12) may produce irritation of mucous membranes, incoordination, giddiness, nausea, vertigo, confusion, headache, appetite loss, drowsiness, tremors and anaesthetic stupor. Massive exposures may produce central nervous system depression with sudden collapse and deep coma; fatalities have been recorded. Irritation of the brain and/or apnoeic anoxia may produce convulsions. Although recovery following overexposure is generally complete, cerebral micro-haemorrhage of focal post-inflammatory scarring may produce epileptiform seizures some months after the exposure. Pulmonary episodes may include chemical pneumonitis with oedema and haemorrhage. The lighter hydrocarbons may produce kidney and neurotoxic effects. Pulmonary irritancy increases with carbon chain length for paraffins and olefins. Alkenes produce pulmonary oedema at high concentrations. Liquid paraffins may produce anaesthesia and depressant actions leading to weakness, dizziness, slow and shallow respiration, unconsciousness, convulsions and death. C5-7 paraffins may also produce polyneuropathy. Aromatic hydrocarbons accumulate in lipid rich tissues (typically the brain, spinal cord and peripheral nerves) and may produce functional impairment manifested by nonspecific symptoms such as nausea, weakness, fatigue and vertigo; severe exposures may produce inebriation or unconsciousness. Many of the petroleum hydrocarbons are cardiac sensitisers and may cause ventricular fibrillations.</p> <p>Central nervous system (CNS) depression may include nonspecific discomfort, symptoms of giddiness, headache, dizziness, nausea, anaesthetic effects, slowed reaction time, slurred speech and may progress to unconsciousness. Serious poisonings may result in respiratory depression and may be fatal. Acute effects from inhalation of high concentrations of vapour are pulmonary irritation, including coughing, with nausea; central nervous system depression - characterised by headache and dizziness, increased reaction time, fatigue and loss of co-ordination</p> <p>Inhalation of aerosols (mists, fumes), generated by the material during the course of normal handling, may be damaging to the health of the individual.</p> |
| <b>Ingestion</b> | <p>Swallowing of the liquid may cause aspiration of vomit into the lungs with the risk of haemorrhaging, pulmonary oedema, progressing to chemical pneumonitis; serious consequences may result.</p> <p>Signs and symptoms of chemical (aspiration) pneumonitis may include coughing, gasping, choking, burning of the mouth, difficult breathing, and bluish coloured skin (cyanosis).</p> <p>Accidental ingestion of the material may be damaging to the health of the individual.</p> <p>Ingestion of petroleum hydrocarbons may produce irritation of the pharynx, oesophagus, stomach and small intestine with oedema and mucosal ulceration resulting; symptoms include a burning sensation in the mouth and throat. Large amounts may produce narcosis with nausea and vomiting, weakness or dizziness, slow and shallow respiration, swelling of the abdomen, unconsciousness and convulsions. Myocardial injury may produce arrhythmias, ventricular fibrillation and electrocardiographic changes. Central nervous system depression may also occur. Light aromatic hydrocarbons produce a warm, sharp, tingling sensation on contact with taste buds and may anaesthetise the tongue. Aspiration into the lungs may produce coughing, gagging and a chemical pneumonitis with pulmonary oedema and haemorrhage.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

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| <b>Skin Contact</b> | <p>Skin contact with the material may be harmful; systemic effects may result following absorption.</p> <p>Evidence exists, or practical experience predicts, that the material either produces inflammation of the skin in a substantial number of individuals following direct contact, and/or produces significant inflammation when applied to the healthy intact skin of animals, for up to four hours, such inflammation being present twenty-four hours or more after the end of the exposure period. Skin irritation may also be present after prolonged or repeated exposure; this may result in a form of contact dermatitis (nonallergic). The dermatitis is often characterised by skin redness (erythema) and swelling (oedema) which may progress to blistering (vesiculation), scaling and thickening of the epidermis. At the microscopic level there may be intercellular oedema of the spongy layer of the skin (spongiosis) and intracellular oedema of the epidermis.</p> <p>The material may accentuate any pre-existing dermatitis condition</p> <p>Repeated exposure may cause skin cracking, flaking or drying following normal handling and use.</p> <p>Open cuts, abraded or irritated skin should not be exposed to this material</p> <p>Entry into the blood-stream through, for example, cuts, abrasions, puncture wounds or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Eye</b>          | <p>Limited evidence exists, or practical experience suggests, that the material may cause eye irritation in a substantial number of individuals and/or is expected to produce significant ocular lesions which are present twenty-four hours or more after instillation into the eye(s) of experimental animals. Repeated or prolonged eye contact may cause inflammation characterised by temporary redness (similar to windburn) of the conjunctiva (conjunctivitis); temporary impairment of vision and/or other transient eye damage/ulceration may occur.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Chronic</b>      | <p>On the basis, primarily, of animal experiments, concern has been expressed that the material may produce carcinogenic or mutagenic effects; in respect of the available information, however, there presently exists inadequate data for making a satisfactory assessment.</p> <p>Harmful: danger of serious damage to health by prolonged exposure through inhalation.</p> <p>Serious damage (clear functional disturbance or morphological change which may have toxicological significance) is likely to be caused by repeated or prolonged exposure. As a rule the material produces, or contains a substance which produces severe lesions. Such damage may become apparent following direct application in subchronic (90 day) toxicity studies or following sub-acute (28 day) or chronic (two-year) toxicity tests.</p> <p>Exposure to the material may cause concerns for human fertility, generally on the basis that results in animal studies provide sufficient evidence to cause a strong suspicion of impaired fertility in the absence of toxic effects, or evidence of impaired fertility occurring at around the same dose levels as other toxic effects, but which are not a secondary non-specific consequence of other toxic effects.</p> <p>Exposure to the material may cause concerns for humans owing to possible developmental toxic effects, generally on the basis that results in appropriate animal studies provide strong suspicion of developmental toxicity in the absence of signs of marked maternal toxicity, or at around the same dose levels as other toxic effects but which are not a secondary non-specific consequence of other toxic effects.</p> <p>Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems. Repeated or prolonged exposure to mixed hydrocarbons may produce narcosis with dizziness, weakness, irritability, concentration and/or memory loss, tremor in the fingers and tongue, vertigo, olfactory disorders, constriction of visual field, paraesthesias of the extremities, weight loss and anaemia and degenerative changes in the liver and kidney. Chronic exposure by petroleum workers, to the lighter hydrocarbons, has been associated with visual disturbances, damage to the central nervous system, peripheral neuropathies (including numbness and paraesthesias), psychological and neurophysiological deficits, bone marrow toxicities (including hypoplasia possibly due to benzene) and hepatic and renal involvement. Chronic dermal exposure to petroleum hydrocarbons may result in defatting which produces localised dermatoses. Surface cracking and erosion may also increase susceptibility to infection by microorganisms. One epidemiological study of petroleum refinery workers has reported elevations in standard mortality ratios for skin cancer along with a dose-response relationship indicating an association between routine workplace exposure to petroleum or one of its constituents and skin cancer, particularly melanoma. Other studies have been unable to confirm this finding.</p> <p>Chronic solvent inhalation exposures may result in nervous system impairment and liver and blood changes. [PATTYS]</p> |

|                                                   |                                                    |                                   |
|---------------------------------------------------|----------------------------------------------------|-----------------------------------|
| <b>Subframe Black</b>                             | <b>TOXICITY</b>                                    | <b>IRRITATION</b>                 |
|                                                   | Not Available                                      | Not Available                     |
| <b>naphtha petroleum, light aliphatic solvent</b> | <b>TOXICITY</b>                                    | <b>IRRITATION</b>                 |
|                                                   | Dermal (rabbit) LD50: >1900 mg/kg <sup>[1]</sup>   | Not Available                     |
|                                                   | Oral (rat) LD50: >4500 mg/kg <sup>[1]</sup>        |                                   |
| <b>white spirit</b>                               | <b>TOXICITY</b>                                    | <b>IRRITATION</b>                 |
|                                                   | Dermal (rabbit) LD50: >1900 mg/kg <sup>[1]</sup>   | Eye (human): 470 ppm/15m          |
|                                                   | Dermal (rabbit) LD50: >1900 mg/kg <sup>[1]</sup>   | Eye (rabbit): 500 mg/24h moderate |
|                                                   | Dermal (rabbit) LD50: >1900 mg/kg <sup>[1]</sup>   | Nil reported                      |
|                                                   | Dermal (rabbit) LD50: >1900 mg/kg <sup>[1]</sup>   |                                   |
|                                                   | Dermal (rabbit) LD50: >2000 mg/kg <sup>[1]</sup>   |                                   |
|                                                   | Dermal (rabbit) LD50: >3000 mg/kg <sup>[2]</sup>   |                                   |
|                                                   | dermal (rat) LD50: 28000 mg/kg*n <sup>[2]</sup>    |                                   |
|                                                   | Inhalation (rat) LC50: >1400 ppm/8H <sup>[2]</sup> |                                   |
|                                                   | Inhalation (rat) LC50: 3400 ppm/4H <sup>[2]</sup>  |                                   |
|                                                   | Inhalation (rat) LC50: 61 mg/L/4H <sup>[2]</sup>   |                                   |
|                                                   | Oral (rat) LD50: >19650 mg/kgd <sup>[2]</sup>      |                                   |
|                                                   | Oral (rat) LD50: >4300 mg/kgd <sup>[2]</sup>       |                                   |
|                                                   | Oral (rat) LD50: >4500 mg/kg <sup>[1]</sup>        |                                   |
|                                                   | Oral (rat) LD50: >4500 mg/kg <sup>[1]</sup>        |                                   |
|                                                   | Oral (rat) LD50: >4500 mg/kg <sup>[1]</sup>        |                                   |
|                                                   | Oral (rat) LD50: >5000 mg/kg <sup>[2]</sup>        |                                   |
|                                                   | Oral (rat) LD50: >5000 mg/kg <sup>[1]</sup>        |                                   |

## Subframe Black

|                |                                                                                                                                                                                                                              |                           |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| n-hexane       | <b>TOXICITY</b>                                                                                                                                                                                                              | <b>IRRITATION</b>         |
|                | Dermal (rabbit) LD50: >3301.5 mg/kg <sup>[1]</sup>                                                                                                                                                                           | Eye(rabbit): 10 mg - mild |
|                | Inhalation (rat) LC50: 48000 ppm/4H <sup>[2]</sup>                                                                                                                                                                           |                           |
|                | Oral (rat) LD50: 15847.2 mg/kg <sup>[1]</sup>                                                                                                                                                                                |                           |
| carbon black   | <b>TOXICITY</b>                                                                                                                                                                                                              | <b>IRRITATION</b>         |
|                | Dermal (rabbit) LD50: >3000 mg/kg <sup>[2]</sup>                                                                                                                                                                             | Not Available             |
|                | Oral (rat) LD50: >8000 mg/kg <sup>[1]</sup>                                                                                                                                                                                  |                           |
| <b>Legend:</b> | 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 |                           |

|                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>WHITE SPIRIT</b>                                                  | white spirit, as CAS RN 8052-41-3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>N-HEXANE</b>                                                      | The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>CARBON BLACK</b>                                                  | No significant acute toxicological data identified in literature search.<br><b>WARNING:</b> This substance has been classified by the IARC as Group 2B: Possibly Carcinogenic to Humans.<br>Inhalation (rat) TCLo: 50 mg/m <sup>3</sup> /6h/90D-I Nil reported                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>NAPHTHA PETROLEUM, LIGHT ALIPHATIC SOLVENT &amp; WHITE SPIRIT</b> | <b>for petroleum:</b><br>This product contains benzene which is known to cause acute myeloid leukaemia and n-hexane which has been shown to metabolize to compounds which are neuropathic.<br>This product contains toluene. There are indications from animal studies that prolonged exposure to high concentrations of toluene may lead to hearing loss.<br>This product contains ethyl benzene and naphthalene from which there is evidence of tumours in rodents<br><b>Carcinogenicity:</b> Inhalation exposure to mice causes liver tumours, which are not considered relevant to humans. Inhalation exposure to rats causes kidney tumours which are not considered relevant to humans.<br><b>Mutagenicity:</b> There is a large database of mutagenicity studies on gasoline and gasoline blending streams, which use a wide variety of endpoints and give predominantly negative results. All in vivo studies in animals and recent studies in exposed humans (e.g. petrol service station attendants) have shown negative results in mutagenicity assays.<br><b>Reproductive Toxicity:</b> Repeated exposure of pregnant rats to high concentrations of toluene (around or exceeding 1000 ppm) can cause developmental effects, such as lower birth weight and developmental neurotoxicity, on the foetus. However, in a two-generation reproductive study in rats exposed to gasoline vapour condensate, no adverse effects on the foetus were observed.<br><b>Human Effects:</b> Prolonged/ repeated contact may cause defatting of the skin which can lead to dermatitis and may make the skin more susceptible to irritation and penetration by other materials.<br><br>Lifetime exposure of rodents to gasoline produces carcinogenicity although the relevance to humans has been questioned. Gasoline induces kidney cancer in male rats as a consequence of accumulation of the alpha2-microglobulin protein in hyaline droplets in the male (but not female) rat kidney. Such abnormal accumulation represents lysosomal overload and leads to chronic renal tubular cell degeneration, accumulation of cell debris, mineralisation of renal medullary tubules and necrosis. A sustained regenerative proliferation occurs in epithelial cells with subsequent neoplastic transformation with continued exposure. The alpha2-microglobulin is produced under the influence of hormonal controls in male rats but not in females and, more importantly, not in humans. |

|                                          |   |                                 |   |
|------------------------------------------|---|---------------------------------|---|
| <b>Acute Toxicity</b>                    | ✓ | <b>Carcinogenicity</b>          | ✓ |
| <b>Skin Irritation/Corrosion</b>         | ✓ | <b>Reproductivity</b>           | ✓ |
| <b>Serious Eye Damage/Irritation</b>     | ⊘ | <b>STOT - Single Exposure</b>   | ✓ |
| <b>Respiratory or Skin sensitisation</b> | ⊘ | <b>STOT - Repeated Exposure</b> | ✓ |
| <b>Mutagenicity</b>                      | ⊘ | <b>Aspiration Hazard</b>        | ✓ |

**Legend:** ✓ – Data required to make classification available  
 ✗ – Data available but does not fill the criteria for classification  
 ⊘ – Data Not Available to make classification

## SECTION 12 ECOLOGICAL INFORMATION

## Toxicity

## NOT AVAILABLE

| Ingredient                                 | Endpoint      | Test Duration | Effect        | Value         | Species       | BCF           |
|--------------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| naphtha petroleum, light aliphatic solvent | Not Available |
| white spirit                               | Not Available |
| Polymeric Synthetic Resins                 | Not Available |
| n-hexane                                   | Not Available |
| carbon black                               | Not Available |

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

Continued...

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.**

#### Persistence and degradability

| Ingredient | Persistence: Water/Soil | Persistence: Air |
|------------|-------------------------|------------------|
| n-hexane   | LOW                     | LOW              |

#### Bioaccumulative potential

| Ingredient | Bioaccumulation       |
|------------|-----------------------|
| n-hexane   | MEDIUM (LogKOW = 3.9) |

#### Mobility in soil

| Ingredient | Mobility        |
|------------|-----------------|
| n-hexane   | LOW (KOC = 149) |

### SECTION 13 DISPOSAL CONSIDERATIONS

#### Waste treatment methods

|                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product / Packaging disposal</b> | <ul style="list-style-type: none"> <li>▶ Containers may still present a chemical hazard/ danger when empty.</li> <li>▶ Return to supplier for reuse/ recycling if possible.</li> <li>Otherwise:               <ul style="list-style-type: none"> <li>▶ If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill.</li> <li>▶ Where possible retain label warnings and MSDS and observe all notices pertaining to the product.</li> <li>▶ <b>DO NOT allow wash water from cleaning or process equipment to enter drains.</b></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>▶ Recycle wherever possible.</li> <li>▶ Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.</li> <li>▶ Dispose of by: burial in a land-fill specifically licenced to accept chemical and / or pharmaceutical wastes or Incineration in a licenced apparatus (after admixture with suitable combustible material).</li> <li>▶ Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.</li> </ul> </li> </ul> |
|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### SECTION 14 TRANSPORT INFORMATION

#### Labels Required

|                                                                                     |      |
|-------------------------------------------------------------------------------------|------|
|  |      |
| <b>Marine Pollutant</b>                                                             | NO   |
| <b>HAZCHEM</b>                                                                      | ☛3YE |

#### Land transport (ADG)

|                                     |                                                                                                                                                                                            |                    |       |                  |                |
|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-------|------------------|----------------|
| <b>UN number</b>                    | 1263                                                                                                                                                                                       |                    |       |                  |                |
| <b>Packing group</b>                | II                                                                                                                                                                                         |                    |       |                  |                |
| <b>UN proper shipping name</b>      | PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning or reducing compound) |                    |       |                  |                |
| <b>Environmental hazard</b>         | No relevant data                                                                                                                                                                           |                    |       |                  |                |
| <b>Transport hazard class(es)</b>   | <table border="0"> <tr> <td>Class</td> <td>3</td> </tr> <tr> <td>Subrisk</td> <td>Not Applicable</td> </tr> </table>                                                                       | Class              | 3     | Subrisk          | Not Applicable |
| Class                               | 3                                                                                                                                                                                          |                    |       |                  |                |
| Subrisk                             | Not Applicable                                                                                                                                                                             |                    |       |                  |                |
| <b>Special precautions for user</b> | <table border="0"> <tr> <td>Special provisions</td> <td>163 *</td> </tr> <tr> <td>Limited quantity</td> <td>5 L</td> </tr> </table>                                                        | Special provisions | 163 * | Limited quantity | 5 L            |
| Special provisions                  | 163 *                                                                                                                                                                                      |                    |       |                  |                |
| Limited quantity                    | 5 L                                                                                                                                                                                        |                    |       |                  |                |

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

|                                   |                                                                                                                                                                                           |                 |   |                     |                |          |    |
|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---|---------------------|----------------|----------|----|
| <b>UN number</b>                  | 1263                                                                                                                                                                                      |                 |   |                     |                |          |    |
| <b>Packing group</b>              | II                                                                                                                                                                                        |                 |   |                     |                |          |    |
| <b>UN proper shipping name</b>    | Paint (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base); Paint related material (including paint thinning or reducing compounds) |                 |   |                     |                |          |    |
| <b>Environmental hazard</b>       | No relevant data                                                                                                                                                                          |                 |   |                     |                |          |    |
| <b>Transport hazard class(es)</b> | <table border="0"> <tr> <td>ICAO/IATA Class</td> <td>3</td> </tr> <tr> <td>ICAO / IATA Subrisk</td> <td>Not Applicable</td> </tr> <tr> <td>ERG Code</td> <td>3L</td> </tr> </table>       | ICAO/IATA Class | 3 | ICAO / IATA Subrisk | Not Applicable | ERG Code | 3L |
| ICAO/IATA Class                   | 3                                                                                                                                                                                         |                 |   |                     |                |          |    |
| ICAO / IATA Subrisk               | Not Applicable                                                                                                                                                                            |                 |   |                     |                |          |    |
| ERG Code                          | 3L                                                                                                                                                                                        |                 |   |                     |                |          |    |

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

|                                     |                                                                                                                                                                                            |                |
|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| <b>UN number</b>                    | 1263                                                                                                                                                                                       |                |
| <b>Packing group</b>                | II                                                                                                                                                                                         |                |
| <b>UN proper shipping name</b>      | PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning or reducing compound) |                |
| <b>Environmental hazard</b>         | Not Applicable                                                                                                                                                                             |                |
| <b>Transport hazard class(es)</b>   | IMDG Class                                                                                                                                                                                 | 3              |
|                                     | IMDG Subrisk                                                                                                                                                                               | Not Applicable |
| <b>Special precautions for user</b> | EMS Number                                                                                                                                                                                 | F-E , S-E      |
|                                     | Special provisions                                                                                                                                                                         | 163            |
|                                     | Limited Quantities                                                                                                                                                                         | 5 L            |

**Transport in bulk according to Annex II of MARPOL 73 / 78 and the IBC code**

| Source                                                                          | Ingredient   | Pollution Category |
|---------------------------------------------------------------------------------|--------------|--------------------|
| IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk | white spirit | Y                  |
| IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk | n-hexane     | X; Y               |

**SECTION 15 REGULATORY INFORMATION****Safety, health and environmental regulations / legislation specific for the substance or mixture****NAPHTHA PETROLEUM, LIGHT ALIPHATIC SOLVENT(64742-89-8.) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

|                                                                                                                             |                                                                                                                              |
|-----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| Australia Hazardous Substances Information System - Consolidated Lists<br>Australia Inventory of Chemical Substances (AICS) | International Air Transport Association (IATA) Dangerous Goods Regulations - Prohibited List<br>Passenger and Cargo Aircraft |
|-----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|

**WHITE SPIRIT(8052-41-3) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

|                                                                                                        |                                                                                                                                                       |
|--------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| Australia Exposure Standards<br>Australia Hazardous Substances Information System - Consolidated Lists | Australia Inventory of Chemical Substances (AICS)<br>International Agency for Research on Cancer (IARC) - Agents Classified by the IARC<br>Monographs |
|--------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|

**N-HEXANE(110-54-3) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

|                                                                                                        |                                                   |
|--------------------------------------------------------------------------------------------------------|---------------------------------------------------|
| Australia Exposure Standards<br>Australia Hazardous Substances Information System - Consolidated Lists | Australia Inventory of Chemical Substances (AICS) |
|--------------------------------------------------------------------------------------------------------|---------------------------------------------------|

**CARBON BLACK(1333-86-4) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

|                                                                                                        |                                                                                                                                                       |
|--------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| Australia Exposure Standards<br>Australia Hazardous Substances Information System - Consolidated Lists | Australia Inventory of Chemical Substances (AICS)<br>International Agency for Research on Cancer (IARC) - Agents Classified by the IARC<br>Monographs |
|--------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|

| National Inventory            | Status                                                                                                                                                                                |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Australia - AICS              | Y                                                                                                                                                                                     |
| Canada - DSL                  | Y                                                                                                                                                                                     |
| Canada - NDSL                 | N (white spirit; naphtha petroleum, light aliphatic solvent; n-hexane; carbon black)                                                                                                  |
| China - IECSC                 | Y                                                                                                                                                                                     |
| Europe - EINEC / ELINCS / NLP | Y                                                                                                                                                                                     |
| Japan - ENCS                  | N (naphtha petroleum, light aliphatic solvent)                                                                                                                                        |
| Korea - KECI                  | Y                                                                                                                                                                                     |
| New Zealand - NZIoC           | Y                                                                                                                                                                                     |
| Philippines - PICCS           | Y                                                                                                                                                                                     |
| USA - TSCA                    | Y                                                                                                                                                                                     |
| <b>Legend:</b>                | 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**

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 (M)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.

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