1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product identifier

Product name: PROTITE CLEAR CASTING & EMBEDDING RESIN
Synonym(s): PF-FRCE0500

1.2 Uses and uses advised against

Use(s): FIBREGLASS REINFORCEMENT • FIBREGLASS REPAIR

1.3 Details of the supplier of the product

Supplier name: TRADEWARE GROUP PTY LTD
Address: 32 Airds Road, Minto, NSW, 2566, AUSTRALIA
Telephone: 1300 658 494
Fax: 1300 658 453

1.4 Emergency telephone number(s)

Emergency: 13 11 26 (Poisons Information Centre)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

CLASSIFIED AS HAZARDOUS ACCORDING TO AUSTRALIAN WHS REGULATIONS

GHS classification(s):
- Flammable Liquids: Category 3
- Skin Corrosion/Irritation: Category 2
- Serious Eye Damage / Eye Irritation: Category 2A
- Acute Toxicity: Inhalation: Category 4
- Specific Target Organ Systemic Toxicity (Single Exposure): Category 3
- Carcinogenicity: Category 2
- Specific Target Organ Systemic Toxicity (Repeated Exposure): Category 2

2.2 Label elements

Signal word: WARNING

Pictogram(s):

Hazard statement(s):
- H226: Flammable liquid and vapour.
- H315: Causes skin irritation.
- H319: Causes serious eye irritation.
- H332: Harmful if inhaled.
- H335: May cause respiratory irritation.
- H351: Suspected of causing cancer.
- H373: May cause damage to organs through prolonged or repeated exposure.
3. COMPOSITION/ INFORMATION ON INGREDIENTS

3.1 Substances / Mixtures

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS Number</th>
<th>EC Number</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>STYRENE</td>
<td>100-42-5</td>
<td>202-851-5</td>
<td>30 to 60%</td>
</tr>
<tr>
<td>UNSATURATED POLYESTER RESIN</td>
<td>-</td>
<td>-</td>
<td>30 to 60%</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

4.1 Description of first aid measures

**Eye**
If in eyes, hold eyelids apart and flush continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre, a doctor, or for at least 15 minutes.

**Inhalation**
If inhaled, remove from contaminated area. To protect rescuer, use a Type A (Organic vapour) respirator or an Air-line respirator (in poorly ventilated areas). Apply artificial respiration if not breathing.

**Skin**
If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. Continue flushing with water until advised to stop by a Poisons Information Centre or a doctor.

**Ingestion**
For advice, contact a Poison Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). If swallowed, do not induce vomiting.

**First aid facilities**
Eye wash facilities and safety shower should be available.

4.2 Most important symptoms and effects, both acute and delayed
Irritating to the eyes, skin and respiratory system. Suspected of causing cancer. May cause damage to organs (nasal epithelial and ear) and through prolonged or repeated exposure.

4.3 Immediate medical attention and special treatment needed
Treat symptomatically.

5. FIRE FIGHTING MEASURES
5.1 Extinguishing media
Dry agent, carbon dioxide or foam. Prevent contamination of drains and waterways.

5.2 Special hazards arising from the substance or mixture
Flammable. May evolve toxic gases (carbon and styrene oxides, hydrocarbons) when heated to decomposition. Styrene will polymerise readily at elevated temperatures and may violently rupture sealed containers. May form explosive mixtures with air. Eliminate all ignition sources including cigarettes, open flames, spark producing switches/tools, pilot lights, heaters, naked lights, mobile phones, etc when handling. Earth containers when dispensing fluids.

5.3 Advice for firefighters
Evacuate area and contact emergency services. Toxic gases may be evolved in a fire situation. Remain upwind and notify those downwind of hazard. Wear full protective equipment including Self Contained Breathing Apparatus (SCBA) when combating fire. Use waterfog to cool intact containers and nearby storage areas.

5.4 Hazchem code
-3Y
-3 Alcohol Resistant Foam is the preferred firefighting medium but, if it is not available, normal foam can be used.
Y Risk of violent reaction or explosion. Wear full fire kit and breathing apparatus. Contain spill and run-off.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Wear Personal Protective Equipment (PPE) as detailed in section 8 of the SDS. Clear area of all unprotected personnel. Ventilate area where possible. Contact emergency services where appropriate.

6.2 Environmental precautions
Prevent product from entering drains and waterways.

6.3 Methods of cleaning up
Contain spillage, then cover / absorb spill with non-combustible absorbent material (vermiculite, sand, or similar), collect and place in suitable containers for disposal. Eliminate all sources of ignition.

6.4 Reference to other sections
See Sections 8 and 13 for exposure controls and disposal.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas.

7.2 Conditions for safe storage, including any incompatibilities
Store in a cool, dry, well ventilated area, removed from incompatible substances, heat or ignition sources and foodstuffs. Ensure containers are adequately labelled, protected from physical damage and sealed when not in use. Check regularly for leaks or spills. Large storage areas should have appropriate ventilation and fire protection systems.

7.3 Specific end use(s)
No information provided.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters
Exposure standards

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Reference</th>
<th>TWA</th>
<th>STEL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>ppm</td>
<td>mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ppm</td>
<td>mg/m³</td>
</tr>
<tr>
<td>Styrene, monomer</td>
<td>SWA (AUS)</td>
<td>50</td>
<td>213</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100</td>
<td>426</td>
</tr>
</tbody>
</table>
8.2 Exposure controls

**Engineering controls**
Avoid inhalation. Use in well ventilated areas. Where an inhalation risk exists, mechanical explosion proof extraction ventilation is recommended. Flammable/explosive vapours may accumulate in poorly ventilated areas. Vapours are heavier than air and may travel some distance to an ignition source and flash back. Maintain vapour/mist levels below the recommended exposure standard.

**PPE**
- **Eye / Face**
  Wear splash-proof goggles.
- **Hands**
  Wear viton (R) or nitrile gloves.
- **Body**
  Wear coveralls.
- **Respiratory**
  Wear a Type A (Organic vapour) respirator. If sanding dry product, wear a Class P1 (Particulate) respirator.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

#### 9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appearance</strong></td>
<td>LIQUID</td>
</tr>
<tr>
<td><strong>Odour</strong></td>
<td>SWEET OR SHARP AROMATIC ODOR</td>
</tr>
<tr>
<td><strong>Flammability</strong></td>
<td>FLAMMABLE</td>
</tr>
<tr>
<td><strong>Flash point</strong></td>
<td>31°C (cc)</td>
</tr>
<tr>
<td><strong>Boiling point</strong></td>
<td>145°C (Approximately)</td>
</tr>
<tr>
<td><strong>Melting point</strong></td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td><strong>Evaporation rate</strong></td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td><strong>pH</strong></td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td><strong>Vapour density</strong></td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td><strong>Specific gravity</strong></td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td><strong>Solubility (water)</strong></td>
<td>INSOLUBLE</td>
</tr>
<tr>
<td><strong>Vapour pressure</strong></td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td><strong>Upper explosion limit</strong></td>
<td>6.1 %</td>
</tr>
<tr>
<td><strong>Lower explosion limit</strong></td>
<td>1.1 %</td>
</tr>
<tr>
<td><strong>Partition coefficient</strong></td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td><strong>Autoignition temperature</strong></td>
<td>490°C (Styrene)</td>
</tr>
<tr>
<td><strong>Decomposition temperature</strong></td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td><strong>Viscosity</strong></td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td><strong>Explosive properties</strong></td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td><strong>Oxidising properties</strong></td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td><strong>Odour threshold</strong></td>
<td>NOT AVAILABLE</td>
</tr>
</tbody>
</table>

#### 9.2 Other information

- **% Volatiles**
  33 % to 67 %

### 10. STABILITY AND REACTIVITY

#### 10.1 Reactivity
Carefully review all information provided in sections 10.2 to 10.6.

#### 10.2 Chemical stability
Stable under recommended conditions of storage.
10.3 Possibility of hazardous reactions
Styrene may polymerise with violent rupture/explosion.

10.4 Conditions to avoid
Avoid heat, sparks, open flames and other ignition sources.

10.5 Incompatible materials
Incompatible with oxidising agents (e.g. hypochlorites), acids (e.g. nitric acid), alkalis (e.g. sodium hydroxide), amines, halogens, sunlight, ferrous salts, heat and ignition sources. May polymerise with violent rupture/explosion.

10.6 Hazardous decomposition products
May evolve toxic gases (carbon and styrene oxides, hydrocarbons) when heated to decomposition.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

<table>
<thead>
<tr>
<th>Acute toxicity</th>
<th>Information available for the product:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Harmful if inhaled.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Information available for the ingredient(s):</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Oral Toxicity (LD50)</th>
<th>Dermal Toxicity (LD50)</th>
<th>Inhalation Toxicity (LC50)</th>
</tr>
</thead>
<tbody>
<tr>
<td>STYRENE</td>
<td>316 mg/kg (mouse)</td>
<td>--</td>
<td>9500 mg/m³/4 hours</td>
</tr>
</tbody>
</table>

Skin
Contact may result in drying and defatting of the skin, rash and dermatitis.

Eye
Contact may result in irritation, lacrimation, pain and redness.

Sensitization
Not classified as causing skin or respiratory sensitisation.

Mutagenicity
Insufficient data available to classify as a mutagen.

Carcinogenicity
Styrene is classified as possibly carcinogenic to humans (IARC Group 2B).

Reproductive
Insufficient data available to classify as a reproductive toxin.

STOT – single exposure
Over exposure may result in irritation of the nose and throat, coughing, nausea, vomiting, dizziness and breathing difficulties. High level exposure may result in respiratory paralysis and unconsciousness.

STOT – repeated exposure
May cause damage to organs (nasal epithelial and ear) through prolonged or repeated exposure to styrene if inhaled.

Aspiration
Not classified as causing aspiration.

12. ECOLOGICAL INFORMATION

12.1 Toxicty
No information provided.

12.2 Persistence and degradability
WATER: If released to water, styrene will volatilise relatively rapidly and biodegrade, but is not expected to hydrolyse. SOIL: If released to soil it will biodegrade and have low soil mobility. ATMOSPHERE: If released to the atmosphere, styrene will react rapidly with both hydroxyl radicals and ozone with a combined calculated half-life of about 5 hours.

12.3 Bioaccumulative potential
No information provided.

12.4 Mobility in soil
No information provided.

12.5 Other adverse effects
No information provided.

13. DISPOSAL CONSIDERATIONS
13.1 Waste treatment methods

Waste disposal Mix components together (small amounts), absorb with sand, vermiculite or similar and dispose of to an approved landfill site. Ensure protective equipment is worn when mixing. Do not seal containers/tins until reaction is complete. Contact the manufacturer/supplier for additional information (if required). Prevent contamination of drains and waterways as environmental damage may result.

Legislation Dispose of in accordance with relevant local legislation.

14. TRANSPORT INFORMATION

CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE

<table>
<thead>
<tr>
<th>LAND TRANSPORT (ADG)</th>
<th>SEA TRANSPORT (IMDG / IMO)</th>
<th>AIR TRANSPORT (IATA / ICAO)</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.1 UN Number</td>
<td>1866</td>
<td>1866</td>
</tr>
<tr>
<td>14.2 Proper</td>
<td>RESIN SOLUTION, flammable</td>
<td>RESIN SOLUTION, flammable</td>
</tr>
<tr>
<td>Shipping Name</td>
<td></td>
<td>RESIN SOLUTION, flammable</td>
</tr>
<tr>
<td>14.3 Transport</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>hazard class</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>14.4 Packing Group</td>
<td>III</td>
<td>III</td>
</tr>
<tr>
<td>14.5 Environmental</td>
<td></td>
<td></td>
</tr>
<tr>
<td>hazards</td>
<td>No information provided</td>
<td></td>
</tr>
</tbody>
</table>

14.6 Special precautions for user

Hazchem code 3Y
GTEPG 3A1
EMS F-E, S-E

15. REGULATORY INFORMATION

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

Poison schedule Classified as a Schedule 5 (S5) Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

Classifications Safework Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals.

The classifications and phrases listed below are based on the Approved Criteria for Classifying Hazardous Substances [NOHSC: 1008(2004)].

Hazard codes
Carc. Carcinogen
F Flammable
Xi Irritant
Xn Harmful

Risk phrases
R10 Flammable.
R20 Harmful by inhalation.
R36/37/38 Irritating to eyes, respiratory system and skin.
R40 Limited evidence of a carcinogenic effect.
R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.

Safety phrases
S2 Keep out of reach of children.
S23 Do not breathe gas/fumes/vapour/spray (where applicable).
S24 Avoid contact with skin.
S37 Wear suitable gloves.
S46 If swallowed, contact a doctor or Poisons Information Centre immediately and show container or label.

Inventory listing(s) AUSTRALIA: AICS (Australian Inventory of Chemical Substances)
All components are listed on AICS, or are exempt.
EXPOSURE STANDARDS - TIME WEIGHTED AVERAGES: Exposure standards are established on the premise of an 8 hour work period of normal intensity, under normal climatic conditions and where a 16 hour break between shifts exists to enable the body to eliminate absorbed contaminants. In the following circumstances, exposure standards must be reduced: Strenuous work conditions; hot, humid climates; high altitude conditions; extended shifts (which increase the exposure period and shorten the period of recuperation).

RESPIRATORS: In general the use of respirators should be limited and engineering controls employed to avoid exposure. If respiratory equipment must be worn ensure correct respirator selection and training is undertaken. Remember that some respirators may be extremely uncomfortable when used for long periods. The use of air powered or air supplied respirators should be considered where prolonged or repeated use is necessary.

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:
The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

HEALTH EFFECTS FROM EXPOSURE:
It should be noted that the effects from exposure to this product will depend on several factors including: frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a ChemAlert report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td>American Conference of Governmental Industrial Hygienists</td>
</tr>
<tr>
<td>CAS #</td>
<td>Chemical Abstract Service number - used to uniquely identify chemical compounds</td>
</tr>
<tr>
<td>CNS</td>
<td>Central Nervous System</td>
</tr>
<tr>
<td>EC No</td>
<td>EC No - European Community Number</td>
</tr>
<tr>
<td>EMS</td>
<td>Emergency Schedules (Emergency Procedures for Ships Carrying Dangerous Goods)</td>
</tr>
<tr>
<td>GHS</td>
<td>Globally Harmonized System</td>
</tr>
<tr>
<td>GTEPG</td>
<td>Group Text Emergency Procedure Guide</td>
</tr>
<tr>
<td>IARC</td>
<td>International Agency for Research on Cancer</td>
</tr>
<tr>
<td>LC50</td>
<td>Lethal Concentration, 50% / Median Lethal Concentration</td>
</tr>
<tr>
<td>LD50</td>
<td>Lethal Dose, 50% / Median Lethal Dose</td>
</tr>
<tr>
<td>mg/m³</td>
<td>Milligrams per Cubic Metre</td>
</tr>
<tr>
<td>OEL</td>
<td>Occupational Exposure Limit</td>
</tr>
<tr>
<td>pH</td>
<td>relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).</td>
</tr>
<tr>
<td>ppm</td>
<td>Parts Per Million</td>
</tr>
<tr>
<td>STEL</td>
<td>Short-Term Exposure Limit</td>
</tr>
<tr>
<td>STOT-RE</td>
<td>Specific target organ toxicity (repeated exposure)</td>
</tr>
<tr>
<td>STOT-SE</td>
<td>Specific target organ toxicity (single exposure)</td>
</tr>
<tr>
<td>SUSMP</td>
<td>Standard for the Uniform Scheduling of Medicines and Poisons</td>
</tr>
<tr>
<td>SWA</td>
<td>Safe Work Australia</td>
</tr>
<tr>
<td>TLV</td>
<td>Threshold Limit Value</td>
</tr>
<tr>
<td>TWA</td>
<td>Time Weighted Average</td>
</tr>
</tbody>
</table>

Report status

This document has been compiled by RMT on behalf of the manufacturer, importer or supplier of the product and serves as their Safety Data Sheet ('SDS').

It is based on information concerning the product which has been provided to RMT by the manufacturer, importer or supplier or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer, importer or supplier.

While RMT has taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, RMT accepts no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS.
[ End of SDS ]