1. Identification

GHS Product Identifier: POLYVINYL ALCOHOL Diluted Solution

Company Name: CHEM-SUPPLY PTY LTD (ABN 19 008 264 211)
Address: 38 - 50 Bedford Street GILLMAN SA 5013 Australia

Telephone/Fax Number:
Tel: (08) 8440-2000
Fax: (08) 8440-2001

Recommended use of the chemical and restrictions on use:
Classroom demonstrations of partial polymerisation and slime preparation, mould release agent.

Other Names:
Name: POLYVINYL ALCOHOL Diluted Solution TG

Other Information:
EMERGENCY CONTACT NUMBER: +61 08 8440 2000
Business hours: 8:30am to 5:00pm, Monday to Friday.

Chem-Supply Pty Ltd does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product before use or application intended purpose. Preliminary testing of the product before use or application is recommended. Any reliance or purported reliance upon Chem-Supply Pty Ltd with respect to any skill or judgement or advice in relation to the suitability of this product of any purpose is disclaimed. Except to the extent prohibited at law, any condition implied by any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded. This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices Act apply, the liability of Chem-Supply Pty Ltd is limited to the replacement of supply of equivalent goods or payment of the cost of replacing the goods or acquiring equivalent goods.

2. Hazard Identification

GHS classification of the substance/mixture:
Flammable Liquids: Category 2

GHS classification of the substance/mixture:
DANGER

Hazard Statement(s):
H225 Highly flammable liquid and vapour.

Pictogram(s):
Flame

Precautionary statement – Prevention:
P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statement – Response:
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

Precautionary statement – Storage:
P403+P235 Store in a well-ventilated place. Keep cool.

3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS</th>
<th>Proportion</th>
<th>Hazard Symbol</th>
<th>Risk Phrase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purified Water to make up to 100%</td>
<td></td>
<td>0-100 %</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethanol</td>
<td>64-17-5</td>
<td>30-50 %</td>
<td>F</td>
<td>R11</td>
</tr>
<tr>
<td>Polyvinyl Alcohol</td>
<td>9002-89-5</td>
<td>5-15 %</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4. First-aid measures

Inhalation: If inhaled, remove from contaminated area to fresh air immediately. Apply artificial respiration if not breathing. If breathing is difficult, give oxygen. Immediately obtain medical aid if cough or other symptoms appear.

Ingestion: Rinse mouth thoroughly with water immediately. Give water or milk to drink. DO NOT induce vomiting. Seek medical assistance.

Skin: Wash with plenty of soap and water. If swelling, redness, blistering or irritation occurs seek medical advice. Remove contaminated clothing and wash before re-use.

Eye contact: Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. In all cases of eye contamination it is a sensible precaution to seek medical advice.

First Aid Facilities: Maintain eyewash fountain and drench facilities in work area.

Advice to Doctor: For advice, contact the National Poisons Information Centre (Phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor.

5. Fire-fighting measures

Specific Methods: Caution: Use of water spray when fighting fire may be inefficient. Small fire: Use foam, dry chemical, CO2 or water spray. Large fire: Use foam, fog or water spray - Do NOT use water jets. If safe to do so, move undamaged containers from the fire area. Cool containers with flooding quantities of water until well after the fire is out. Avoid getting water inside the containers.

Specific hazards arising from the chemical: HIGHLY FLAMMABLE: These products have a low flash point. Will be easily ignited by heat, sparks or flames. Vapours will form explosive mixtures with air. Vapours will travel to source of ignition and flash back. Most vapours are heavier than air and will collect in low or confined areas (drains, basements, tanks). Many liquids are lighter than water. Containers may explode when heated. Fire will produce irritating, poisonous and/or corrosive gases. Vapours from run-off may create an explosion hazard.

Hazchem Code: •3Y

Precautions in connection with Fire: SCBA and structural firefighter's uniform may provide limited protection. Fully encapsulating, gas-tight suits should be worn for maximum protection.

6. Accidental release measures

Spills & Disposal: Eliminate all ignition sources (no smoking, flares, sparks or flame) within at least 50m. All equipment in handling this product must be earthed. Do NOT touch or walk through this product. Stop leak if safe to do so. Prevent entry into waterways, drains, confined areas. Vapour suppressing foam may be used to control vapours. Water spray may be used to knock down or divert vapours. Absorb spill with earth, sand or other non-combustible material. Use clean, non-sparking tools to collect material and place it in loosely-covered metal or plastic containers for later disposal.

Personal Precautions: Evacuate the area of all non-essential personnel. Avoid substance contact. Avoid generation of dusts: do not inhale dusts. Ensure supply of fresh air in enclosed rooms.

Personal Protection: Wear protective clothing specified for normal operations (see Section 8)

Clean-up Methods - Small Spillages: Absorb or contain liquid with sand, earth or spill control material. Shovel up using non sparking tools and place in a labelled, sealable container for subsequent safe disposal. Put leaking containers in a labelled drum or overdrum.

7. Handling and storage

Conditions for safe storage, including any incompatibilities: Store in cool place and out of direct sunlight. Store in well ventilated area. Store away from sources of heat or ignition. Store away from oxidizing agents. Keep containers securely sealed and protected against physical damage.

Storage Regulations: Refer Australian Standard AS 1940 - 1993 'The storage and handling of flammable and combustible liquids'.

8. Exposure controls/personal protection

<table>
<thead>
<tr>
<th>Occupational exposure limit values</th>
<th>Name</th>
<th>STEL</th>
<th>TWA</th>
</tr>
</thead>
<tbody>
<tr>
<td>mg/m³</td>
<td>ppm</td>
<td>mg/m³</td>
<td>ppm</td>
</tr>
</tbody>
</table>
**POLYVINYL ALCOHOL Diluted Solution**

**Ethanol**
- A time weighted average (TWA) has been established for Ethanol (Safe Work Australia) of 1880 mg/m³, (1000 ppm). The exposure value at the TWA is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week.
- Provide sufficient ventilation to ensure that the working environment is below the TWA (time weighted average). Where vapours or mists are generated, particularly in enclosed areas, and natural ventilation is inadequate, a flame proof exhaust ventilation system is required. Refer to AS 1940-The storage and handling of flammable and combustible liquids and AS 2430-Explosive gas atmospheres for further information concerning ventilation requirements.
- Where ventilation is not adequate, respiratory protection may be required. Avoid breathing vapours or mists. Select and use respirators in accordance with AS 1716 - Respiratory Protective Devices and be selected in accordance with AS 1715 - Selection, Use and Maintenance of Respiratory Protective Devices. When mists or vapours exceed the exposure standards then the use of the following is recommended: Approved respirator with organic vapour and dust/mist filters. Filter capacity and respirator type depends on exposure levels.
- The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate.
- Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.
- The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate.
- Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.
- Final choice of personal protective equipment will depend on individual circumstances and/or according to risk assessments undertaken.
- Safety boots in industrial situations is advisory, foot protection should comply with AS 2210, Occupational protective footwear - Guide to selection, care and use.
- Clean clothing or protective clothing should be worn, preferably with an apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.
- Always wash hands before smoking, eating or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

9. **Physical and chemical properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Form</strong></td>
<td>Liquid</td>
</tr>
<tr>
<td><strong>Appearance</strong></td>
<td>Colourless to yellowish, mobile liquid.</td>
</tr>
<tr>
<td><strong>Odour</strong></td>
<td>Characteristic ethanol odour.</td>
</tr>
<tr>
<td><strong>Solubility in Water</strong></td>
<td>Miscible.</td>
</tr>
<tr>
<td><strong>Flammability</strong></td>
<td>HIGHLY FLAMMABLE. Keep away from heat, sparks or naked flames. Use flameproof equipment and fittings to prevent flammability risk. Electrically link and ground metal containers for transfer of the product to prevent accumulation of static electricity. Ensure adequate ventilation to prevent an explosive vapour-air mixture. Vapours will travel considerable distances to sources of ignition.</td>
</tr>
</tbody>
</table>

10. **Stability and reactivity**

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Chemical Stability</strong></td>
<td>Stable</td>
</tr>
<tr>
<td><strong>Hazardous Decomposition Products</strong></td>
<td>Carbon monoxide and carbon dioxide.</td>
</tr>
<tr>
<td><strong>Hazardous Polymerization</strong></td>
<td>Will not occur.</td>
</tr>
</tbody>
</table>

11. **Toxicological Information**

<table>
<thead>
<tr>
<th>Exposure Route</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ingestion</strong></td>
<td>May be harmful if swallowed. May cause headache, dizziness, dullness, symptoms of central nervous system depression, vomiting, resulting in aspiration pneumonitis.</td>
</tr>
<tr>
<td><strong>Inhalation</strong></td>
<td>Inhalation of mists or aerosols can produce respiratory irritation. May cause irritation and burning pain to the nose and throat. May cause drowsiness or dizziness.</td>
</tr>
<tr>
<td><strong>Skin</strong></td>
<td>Contact with skin may result in irritation. Will have a degreasing action on the skin.</td>
</tr>
<tr>
<td><strong>Eye</strong></td>
<td>May cause eye irritation. Symptoms may be redness, tears and itching.</td>
</tr>
<tr>
<td><strong>Chronic Effects</strong></td>
<td>Repeated or prolonged skin contact may lead to dermatitic effects. May result in headache and central nervous system depression.</td>
</tr>
</tbody>
</table>

12. **Ecological information**

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ecological Information</strong></td>
<td>No information available.</td>
</tr>
</tbody>
</table>
POLYVINYL ALCOHOL Diluted Solution

Environmental Fate
No information available.

Environmental Protection
This product contains a low level (<0.5%) of alkylphenol ethoxylates (APEs) and should be prevented from entering aquatic systems.

13. Disposal considerations
Whatever cannot be saved for recovery or recycling should be disposed of according to relevant local, state and federal government regulations.

14. Transport information
Dangerous goods of Class 3 (Flammable Liquid) are incompatible in a placard load with any of the following:
Class 1, Class 2.1, if both the Class 3 and Class 2.1 dangerous goods are in bulk, Class 2.3, Class 4.2, Class 5, Class 6, if the Class 3 dangerous goods are nitromethane, Class 7.

U.N. Number
1866

UN proper shipping name
RESIN SOLUTION

Transport hazard class(es)
3

Hazchem Code
•3Y

Packing Group
III

EPG Number
3A1

IERG Number
14

15. Regulatory information
Poisons Schedule
Not Scheduled

Hazard Category
Highly Flammable

16. Other Information
Date of preparation or last revision of SDS
July 2009

Literature References
'Standard for the Uniform Scheduling of Medicines and Poisons No. 4', Commonwealth of Australia, June 2013.
'Labelling of Hazardous Workplace Chemicals, Code of Practice' Safe Work Australia.
Standards Australia 'AS 1940-2004 The Storage and Handling of Flammable and Combustible Liquids.
Worksafe Australia, 'Approved Criteria for Classifying Hazardous Substances [NOHSC:1008(2004)]'.
Worksafe Australia, 'Hazardous Substances Information System, 2005'.
Worksafe Australia, 'National Code of Practice for the Labelling of Workplace Hazardous Substances (2011)'.

Contact Person/Point
Paul McCarthy Ph. (08) 8440 2000

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...End Of MSDS...
Product Name: POLYVINYL ALCOHOL Diluted Solution

Classified as hazardous