Section 1: Identification

MANUFACTURER: PACE Technologies
3601 E. 34th St.
Tucson, AZ 85713

INFORMATION PHONE: 520-882-6598

EMERGENCY PHONE: CHEMTREC 800-424-9300 (US) Day or night
Customer No. 16568

TRADE NAME: POLYCAST Resin

CHEMICAL NAME: Unsaturated Polyester Resin

HMIS RATING: HEALTH: 2 FLAMMABILITY: 3 REACTIVITY: 0

HAZARD RATING:

LEAST: 0 SLIGHT: 1 MODERATE: 2 HIGH: 3 EXTREME: 4

Section 2: Hazard(s) Identification

GHS CLASSIFICATION:
- Flammable liquids (Category 3) – H226
- Acute toxicity, oral (Category 4) – H302
- Skin corrosion/irritation (Category 2) – H315
- Sensitization, Skin (category 1) – H317
- Serious eye damage/eye irritation (Category 1) - H318
- Acute toxicity, inhalation (Category 4) – H332
- Sensitization, respiratory (Category 1) – H334
- Specific target organ toxicity, single exposure; Narcotic Effects (Category 3) – H336
- Carcinogenicity (Category 2) – H351
- Specific target organ toxicity, repeated exposure (category 2) – H373

PICTOGRAM(s):

![GHS Pictograms]

SIGNAL WORD: Danger

HAZARD STATEMENTS:
- Hazard Statement(s):
  - H226- Flammable liquid and vapor
  - H302- Harmful if swallowed
  - H315- Causes skin irritation
| H317- May cause an allergic skin reaction |
| H318- Causes serious eye damage |
| H332- Harmful if inhaled |
| H334- May cause allergy or asthma symptoms or breathing difficulties if inhaled |
| H336- May cause drowsiness or dizziness |
| H351- Suspected of causing cancer |
| H373- Causes damage to organs through prolonged or repeated exposure |

**PRECAUTIONARY STATEMENTS:**

**Precautionary Statement(s):**

**Preventions:**
- P201- Obtain special instructions before use.
- P202- Do not handle until all safety precautions have been read and understood.
- P281- Use personal protective equipment as required.
- P210- Keep away from heat/sparks/open flames/hot surfaces. — No smoking.
- P233- Keep container tightly closed.
- P240- Ground/bond container and receiving equipment.
- P241- Use explosion-proof electrical/ventilating/ lighting/equipment.
- P242- Use only non-sparking tools.
- P243- Take precautionary measures against static discharge.
- P260- Do not breathe dust/fume/gas/mist/vapors/spray.
- P261- Avoid breathing dust/fume/gas/mist/vapors/spray.
- P264- Wash skin thoroughly after handling.
- P271- Use only outdoors or in a well-ventilated area.
- P272- Contaminated work clothing should not be allowed out of the workplace.
- P280- Wear protective gloves/protective clothing/eye protection/face protection.
- P285- In case of inadequate ventilation wear respiratory protection.

**Response:**
- P304+P340- IF INHALED: Remove victim to fresh air and Keep at rest in a position comfortable for breathing.
- P304+P341- IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P308+P313- IF exposed or concerned: Get medical advice/attention.
- P312- Call a POISON CENTER or doctor/physician if you feel unwell.
- P314- Get medical advice/attention if you feel unwell.
- P342+P311- IF experiencing respiratory symptoms: call a POISON CENTER or doctor/physician.

**Storage:**
- P403+P233- Store in a well-ventilated place. Keep container tightly closed.
- P403+P235- Store in a well-ventilated place. Keep cool.
- P405- Store locked up.

**Disposal:**
- P501- Dispose of contents/container to Federal, State and Local Regulations.
PHYSICAL AND CHEMICAL HAZARDS:

HUMAN HEALTH: Harmful by inhalation. Vapors from organic solvents may be absorbed through the lungs and cause permanent damage to the nervous system, including the brain. Styrene is suspected to be carcinogenic. The product contains components which may penetrate skin.

ENVIRONMENT: The dangerous properties of the product cannot be evaluated from the available data.

Section 3: Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>INGREDIENT</th>
<th>CAS NO.</th>
<th>PERCENT</th>
<th>OSHA-PEL</th>
<th>ACGIH-TL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unstaturated Polyester Base Resin</td>
<td>See Index</td>
<td>62-64</td>
<td>NE</td>
<td>NE</td>
</tr>
<tr>
<td>Styrene</td>
<td>100-42-5</td>
<td>36-38</td>
<td>50 ppm TWA</td>
<td>50 ppm *</td>
</tr>
</tbody>
</table>

OSHA has formally endorsed a styrene industry proposal for a voluntary 50 ppm PEL for workplace exposure to styrene. This proposal was agreed upon by representatives of the UPR industry. The OSHA STEL is 100 ppm. The ACGIH recently changed the TLV for styrene from 50 ppm to 20 ppm, and the STEL from 100 ppm to 40 ppm.

Section 4: First-Aid Measures

Burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital.

EYE CONTACT: Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyelids widely. If irritation persists: Continue flushing during transport to hospital. Bring along these instructions.

SKIN CONTACT: Remove contaminated clothing immediately and wash skin with soap and water.

INHALATION: Move injured person into fresh air and keep person calm under observation. If uncomfortable: Seek hospital and bring these instructions.
INGESTION: Immediately rinse mouth and drink plenty of water. Keep person under observation. If person becomes uncomfortable seek hospital and bring these instructions. Do not induce vomiting.

Section 5: Fire-Fighting Measures

FLASH POINT: 31.1°C (88 °F) for Volatile Component

FLAMMABLE: Lowest value of Styrene – Lower – 1.1%
Upper value of Styrene – Upper – 6.1%

EXTINGUISHING MEDIA: CO2, Foam, Dry Chemical, Water Spray

HAZARDOUS DECOMPOSITION PRODUCTS: May form toxic materials such as carbon dioxide, carbon monoxide, and various hydrocarbons.

FIRE-FIGHTING EQUIPMENT: Fire may produce toxic thermal decomposition products. Wear a self-contained breathing apparatus (SCBA) with a full face-piece operated in pressure-demand or positive-pressure mode.

Vapors are heavier than air and may travel along the ground or may be moved by ventilation and ignited by ignition sources at locations distant from material handling point.

Never use welding or cutting torch on or near drum (even empty) because product vapor can ignite explosively.

Section 6: Accidental Release Measures

SAFEGUARDS (PERSONNEL): Avoid inhalation of vapors and contact with skin and eyes. Avoid smoking and use of open fire. For personal protection, see section 8.

ENVIRONMENTAL PRECAUTIONS: Avoid discharge into drains, water courses or onto the ground.

SPILL CLEAN UP: Remove sources of ignition. Dam and absorb spillages with sand, earth or other noncombustible material. For waste disposal, see section 13.
Section 7: Handling and Storage

HANDLING (PERSONNEL): Avoid inhalation of vapors and contact with skin and eyes. Avoid smoking and use of open fire. Avoid eating, drinking and smoking when using the product. Observe good chemical hygiene practices.

HANDLING (PHYSICAL ASPECTS): Close container after each use. Ground container when pouring. Keep away from heat, sparks and flames.

STORAGE: Store in tightly closed original container in a well-ventilated place. Store at room temperature. Avoid contact with oxidizing agents.

ENGINEERING CONTROLS: Keep container tightly closed. Observe label precautions. Use ventilation that is adequate to keep employee exposure to airborne concentrations below exposure limits.

Section 8: Exposure Controls/ Personal Protection

ENGINEERING MEASURES: Provide adequate ventilation. Observe Occupational Exposure Limits and minimize the risk of inhalation of vapors. Provide easy access to water supply and eye wash facilities.

PERSONAL PROTECTION: Personal protection equipment should be chosen according to the CEN standards and in collaboration with the supplier of the personal protective equipment.

RESPIRATORY EQUIPMENT: In case of inadequate ventilation: Gas mask with organic vapor canister (chin-style or front or back-mounted.)

HAND PROTECTION: Wear protective gloves. Laminate (PE/EVOH) gloves are recommended. Be aware that the liquid may penetrate the gloves. Frequent change is advisable. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material.

EYE PROTECTION: Wear goggles/face shield.

SKIN PROTECTION: Wear apron or protective clothing in case of splashes.

ENVIRONMENTAL EXPOSURE CONTROLS: Not available.
Section 9: Physical and Chemical Properties

BOILING POINT: 293.4 °F

VAPOR PRESSURE: 4.50 mm/Hg at 68 °F

VAPOR DENSITY: 3.60 at AIR=1

% VOLATILES: 31-37%

APPEARANCE AND ODOR: Clear, Viscous with Characteristic Odor

FORM: Liquid

SPECIFIC GRAVITY: 1.082-1.118 @ 77 °F

EVAPORATION RATE: Slower than Ethyl Ether

Section 10: Stability and Reactivity

CHEMICAL STABILITY: Stable

CONDITIONS TO AVOID: Exposure to excessive heat or open flame, storage in open containers, prolonged storage (6 month), storage above 100 °F (38 °C), and contamination with oxidizing agents.

IMCOMPATIBILITY: Avoid contact with strong alkalies, strong mineral acids, and oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide, low molecular weight hydrocarbons, and organic acids.

POYMERIZATION: Possible.
Section 11: Toxicological Information

INHALATION: Harmful by inhalation. Vapors may cause headache, fatigue, dizziness and nausea.

OTHER POTENTIAL HAZARDS: Frequent inhalation of even small concentrations may cause irritability, fatigue, memory failure and in time permanent damage to the nervous system, including the brain, and possibly liver and kidneys, too. Styrene is suspected to be carcinogenic.

Carcinogenicity:
- National Toxicology Program (NTP): No.
- I.A.R.C. Monographs: Yes
- OSHA: No.

SKIN CONTACT: Irritating and degreasing. Contains components which may penetrate the skin.

EYE CONTACT: Irritating to eyes.

INGESTION: Irritating. May be absorbed in the body and cause dizziness, nausea and vomiting.

Section 12: Ecological Information

MOBILITY: The product is miscible with water. May spread in water systems. The product contains organic solvents which will evaporate easily from all surfaces. The product is insoluble in water.

DEGRADABILITY: The product is not biodegradable. The degradability of the product has not been stated.

EXOTOXICITY: No information available.

BIOACCUMULATIVE POTENTIAL: No data available on bioaccumulation.

OTHER ADVERSE EFFECTS: None known.

Section 13: Disposal Considerations

Dispose of all waste in accordance with federal, state, and local environmental regulatory controls.
Precautions to be taken in handling and storing: protect containers against physical damage and store in ventilated area removed from excessive heat, electrical equipment, and sources of ignition.

Other precautions: ground and bond equipment during transfer into containers. Use non-sparking tools. Dispose of drums with licensed waste hauler. Never weld or flame-cut an empty container.

Section 14: Transportation Information

SHIPPING INFORMATION

DOT PROPER SHIPPING NAME: Resin Solution

NA/UN NUMBER: UN 1866

CLASS 3

PACKING GROUP: III

LABEL: Flammable liquid

Limited Quantity Shipments: <5 L

Section 15: Regulatory Information

EC REGULATIONS-
EINECS: all chemical listed

EEC CLASSIFICATION: HARMFUL

Symbol: Indication of Danger

- Highly Flammable
- Harmful

RISK PHRASES: R10. Flammable
R20 Harmful by inhalation
R36/37/38. Irritating to eyes, respiratory system and skin.

SAFETY PHRASES: S24/25. Avoid contact with skin and eyes
S26. In case of contact with eyes, rinse immediately with plenty of
water and see medical advice.
S51. Use only in well-ventilated areas.
S60. This material and its container must be disposed of as hazardous waste.

SPECIFIC PROVISIONS: TSCA: Listed

NATIONAL REGULATION: Europe/USA:
This Safety Data Sheet has been prepared according to the EU-regulation.
Threshold Limit Values (2008), ACGIH, by the American Conference on Governmental Industrial Hygienists.

Section 16: Other Information

16.1 NFPA 704

Top, Flammability: 2 – Moderate Hazard
Left, Health Hazard: 2 – Moderate Hazard
Right, Reactivity: 0 – Minimal Hazard
Bottom, Special Notice: N/A

Additional Information
NA = NOT APPLICABLE
NE = NOT ESTABLISHED

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