

## Section 1: Identification

**MANUFACTURER:** PACE Technologies  
 3601 E. 34<sup>th</sup> 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

<b>GHS CLASIFICATION:</b>	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
<b>PICTOGRAM(s):</b>	
<b>SIGNAL WORD:</b>	Danger
<b>HAZARD STATEMENTS:</b>	<b>Hazard Statement(s):</b> H226- Flammable liquid and vapor H302- Harmful if swallowed H315- Causes skin irritation

	<p>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</p>
<b>PRECAUTIONARY STATEMENTS:</b>	<p><b>Precautionary Statement(s):</b></p> <p><b>Preventions:</b></p> <p>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.</p> <p><b>Response:</b></p> <p>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.</p> <p><b>Storage:</b></p> <p>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.</p> <p><b>Disposal:</b></p> <p>P501- Dispose of contents/container to Federal, State and Local Regulations.</p>

**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.

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**Section 3: Composition/Information on Ingredients**

INGREDIENT	CAS NO.	PERCENT	OSHA-PEL	ACGIH-TL
Unstaturated Polyester Base Resin	See Index	62-64	NE	NE
Styrene	100-42-5	36-38	50 ppm TWA	50 ppm *

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.

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**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.

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**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:**

CO<sub>2</sub>, 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.

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**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

<b>HANDLING (PERSONNEL):</b>	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.
<b>HANDLING (PHYSICAL ASPECTS):</b>	Close container after each use. Ground container when pouring. Keep away from heat, sparks and flames.
<b>STORAGE:</b>	Store in tightly closed original container in a well-ventilated place. Store at room temperature. Avoid contact with oxidizing agents.
<b>ENGINEERING CONTROLS:</b>	Keep container tightly closed.  Observe label precautions.  Use ventilation that is adequate to keep employee exposure to airborne concentrations below exposure limits.

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## Section 8: Exposure Controls/ Personal Protection

<b>ENGINEERING MEASURES:</b>	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.
<b>PERSONAL PROTECTION:</b>	Personal protection equipment should be chosen according to the CEN standards and in collaboration with the supplier of the personal protective equipment.
<b>RESPIRATORY EQUIPMENT:</b>	In case of inadequate ventilation: Gas mask with organic vapor canister (chin-style or front or back-mounted.)
<b>HAND PROTECTION:</b>	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.
<b>EYE PROTECTION:</b>	Wear goggles/face shield.
<b>SKIN PROTECTION:</b>	Wear apron or protective clothing in case of splashes.
<b>ENVIRONMENTAL EXPOSURE CONTROLS:</b>	Not available.

## Section 9: Physical and Chemical Properties

<b>BOILING POINT:</b>	293.4 °F
<b>VAPOR PRESSURE:</b>	4.50 mm/Hg at 68 °F
<b>VAPOR DENSITY:</b>	3.60 at AIR=1
<b>% VOLATILES:</b>	31-37%
<b>APPEARANCE AND ODOR:</b>	Clear, Viscous with Characteristic Odor
<b>FORM:</b>	Liquid
<b>SPECIFIC GRAVITY:</b>	1.082-1.118 @ 77 °F
<b>EVAPORATION RATE:</b>	Slower than Ethyl Ether

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## Section 10: Stability and Reactivity

<b>CHEMICAL STABILITY:</b>	Stable
<b>CONDITIONS TO AVOID:</b>	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.
<b>IMCOMPATIBILITY:</b>	Avoid contact with strong alkalies, strong mineral acids, and oxidizing agents.
<b>HAZARDOUS DECOMPOSITION PRODUCTS:</b>	Carbon monoxide, carbon dioxide, low molecular weight hydrocarbons, and organic acids.
<b>POYMERIZATION:</b>	Possible.

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## Section 11: Toxicological Information

<b>INHALATION:</b>	Harmful by inhalation. Vapors may cause headache, fatigue, dizziness and nausea.
<b>OTHER POTENTIAL HAZARDS:</b>	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.
<b>SKIN CONTACT:</b>	Irritating and degreasing. Contains components which may penetrate the skin.
<b>EYE CONTACT:</b>	Irritating to eyes.
<b>INGESTION:</b>	Irritating. May be absorbed in the body and cause dizziness, nausea and vomiting.

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## Section 12: Ecological Information

<b>MOBILITY:</b>	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.
<b>DEGRADABILITY:</b>	The product is not biodegradable. The degradability of the product has not been stated.
<b>EXOTOXICITY:</b>	No information available.
<b>BIOACCUMULATIVE POTENTIAL:</b>	No data available on bioaccumulation.
<b>OTHER ADVERSE EFFECTS:</b>	None known.

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## 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.

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## 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



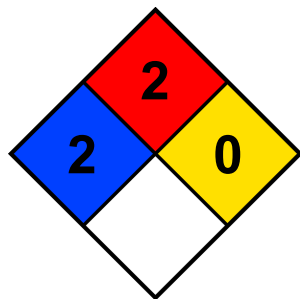
water and see medical advice.  
S51. Use only in well-ventilated areas.  
S60. This material and its container must be disposed of as hazardous waste.

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.  
The Code of Federal Regulation, Title 29, part 1910. Occupational Safety and Health Standards, Air contaminants (OSHA), with amendments.  
International Agency for Research on Cancer (IARC): IARC Monographs on the Evaluation of  
Carcinogenic Risks to Humans. Lyon: IARC, World Health Organization.

## 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

#### **Disclaimer:**

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