

**SECTION 1. PRODUCT AND COMPANY 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  
International call collect CHEMTREC 202-483-7616

**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. COMPOSITION / INFORMATION ON INGREDIENTS**

INGREDIENT	CAS NO.	PERCENT	OSHA-PEL	ACGIH-TL
Unsaturated 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.

**SECTION 3. HAZARDS IDENTIFICATION**

**PHYSICAL AND CHEMICAL HAZARDS:** This product is flammable

**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 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** May form toxic materials such as carbon dioxide, carbon monoxide,

**DECOMPOSITION PRODUCTS:** 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.

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## 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**

<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.

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**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

**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>INCOMPATIBILITY:</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.

**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**

<b>DOT PROPER SHIPPING NAME:</b>	Resin Solution
<b>NA/UN NUMBER:</b>	UN 1866
<b>CLASS</b>	3
<b>PACKING GROUP:</b>	III
<b>LABEL:</b>	Flammable liquid
<b>IDMG CLASS:</b>	3

**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

Additional Information

NA = NOT APPLICABLE

NE = NOT ESTABLISHED

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