

Material Safety Data Sheet

Page 1/8

PREMIUM Acrylic Liquid Hardener

SECTION I PRODUCT IDENTIFICATION

MANUFACTURER: PACE Technologies
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Tucson, AZ 85745

INFORMATION PHONE: 520-882-6598

EMERGENCY PHONE: CHEMTREC 800-424-9300 (US) Day or night
International call collect CHEMTREC 202-483-7616

TRADE NAME: PREMIUM ACRYLIC LIQUID RESIN

CHEMICAL FAMILY: METHYL METHACRYLATE MONOMER, INHIBITED

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

HAZARD RATING:

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

SECTION II COMPOSITION/ INFORMATION ON INGREDIENTS

<u>INGREDIENT (S)</u>	<u>CAS NO.</u>	<u>%</u>
Methyl Methacrylate	80-62-6	>95
Dimethyl Para Toluidine	99-97-8	<5

Ingredients are listed on the TSCA Inventory of Chemical Substances. Those not identified are non-hazardous.

SECTION III HAZARDS IDENTIFICATION

Highly flammable.

Irritating to eyes, respiratory system and skin. May cause sensitization by skin contact. High atmospheric concentrations may lead to irritation of the respiratory tract and anesthetic effects. Repeated and/or prolonged contact may cause dermatitis.

Material Safety Data Sheet

Page 2/8

PREMIUM Acrylic Liquid Hardener

SECTION IV FIRST AID MEASURES

INHALATION:	Remove patient from exposure, keep warm and at rest. Obtain immediate medical attention.
SKIN:	Remove contaminated clothing. Wash skin immediately with water. If symptoms (irritation or blistering) occur obtain medical attention.
EYE:	Irrigate with eyewash solution or clean water, holding the eyelids apart, for at least 15 minutes. Obtain medical attention. Never give anything by mouth to an unconscious person. Call a physician.
INGESTION:	Do not induce vomiting. Wash out mouth with water and give 200-300 ml (half a pint) of water to drink. Obtain medical attention. Never give anything by mouth to an unconscious person. Call a physician.

NOTES TO PHYSICIAN: Activated charcoal slurry may be administered. To prepare activated charcoal slurry, suspend 50 grams activated charcoal in 400 ml water and mix thoroughly. Administer 5 ml/kg, or 350 ml, for an average adult.

SECTION V FIRE FIGHTING MEASURES

Highly Flammable.

May polymerize on heating. Sealed containers may rupture explosively if hot.

FLASH POINT (METHOD):	11.5°C (52.7°F) (TCC)
APPROX. FLAMMABLE LIMITS:	LEL: 2.1% UEL: 12.5%
EXTINGUISHING MEDIA:	Water spray, foam, dry powder or CO2. Keep fire exposed containers cool by spraying with water.
FIRE FIGHTING PROTECTIVE EQUIPMENT:	A self-contained breathing apparatus and suitable protective clothing should be worn in fire conditions.

Material Safety Data Sheet

Page 3/8

PREMIUM Acrylic Liquid Hardener

SECTION VI ACCIDENTAL RELEASE MEASURES

Eliminate sources of ignition. Ensure suitable personal protection (including respiratory protection) during removal of spillages. Prevent entry into drains. Adsorb spillages onto sand, earth or any suitable adsorbent material. Do not adsorb onto sawdust or other combustible materials. Transfer to a container for disposal or recovery. Spillages or uncontrolled discharges into watercourses must be alerted to the appropriate regulatory body.

SECTION VII HANDLING AND STORAGE

- HANDLING:** Avoid contact with skin and eyes.
Avoid inhalation of high concentration of vapors. Use only in well ventilated areas. The vapor is heavier than air; beware of pits and confined spaces. Take precautionary measures against static discharges
- STORAGE:** Keep in a cool, well-ventilated place.
Keep away from sources of ignition – No Smoking. Keep away from heat and direct sunlight.
- IMPORTANT:** Methacrylates stored in bulk must be kept in contact with air (oxygen).

Monomer vapors are uninhibited and may form polymers in vent or flame arresters, resulting in blockage of vents.
- STORAGE TEMPERATURE:** Preferably not exceeding 25 °C.

SECTION VIII EXPOSURE CONTROL/ PERSONAL PROTECTION

Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded.

Consideration should be given to the work procedures involved and the potential extent of exposure as they may determine whether a higher level of protection is required.

The following information is given as general guidance.

- RESPIRATORS:** Wear suitable respiratory protective equipment if exposure to levels above the occupational exposure limit is likely. A suitable mask with filter type A may be appropriate. In the event of formation of particularly high levels of vapor a self-contained breathing apparatus may be appropriate.

Material Safety Data Sheet

Page 4/8

PREMIUM Acrylic Liquid Hardener

EYE PROTECTION: Safety spectacle / Full-face shield.

GLOVES: Wear suitable gloves. PVA/Polyethylene laminate and supported PVA gloves offer the best protection. Gloves should be changed regularly and if excessive exposure has occurred.

OTHER: Wear suitable protective clothing.

OCCUPATIONAL EXPOSURE LIMITS:

HAZARDOUS INGREDIENT (S):	PEL (OSHA) :	TLV (ACGIH) :	COMPANY RECOMMENDATION:
Methyl Methacrylate	100 ppm, 410 mg/m ³ , 8 Hr. TWA	100 ppm, 410 mg/ m ³ , 8 Hr. TWA	50 ppm, 205 mg/ m ³ , 8 Hr. TWA; 100 ppm, 410 mg/m ³ 15 min.

SECTION IX PHYSICAL DATA AND CHEMICAL PROPERTIES

SPECIFIC GRAVITY: 0.9 gm/cc	APPROX. BOIL RANGE: 100.5°C (214°F)
VAPOR DENSITY: 3.5	PERCENT VOLATILE: 100.0
SOLUBILITY IN WATER: 1.6% at 20°C	FLASH POINT (Method): 11.5°C (52.7°F) (TCC)
ODOR: Characteristic strong and acid	FORM and COLOR: Liquid and colorless
APPROX. FLAMMABLE LIMITS: LEL: 2.1% UEL: 12.5%	WATER SOLUBILITY: 1.6% at 20°C
MELTING POINT: -48°C	AUTOIGNITION TEMPERATURE: 421°C (789.8°F)

Material Safety Data Sheet

Page 5/8

PREMIUM Acrylic Liquid Hardener

SECTION X STABILITY AND REACTIVITY

- HAZARDOUS REACTIONS:** Stable in the presence of inhibitor.
- Susceptible to polymerization initiated by prolonged heating or presence of catalyst.
- Incompatible materials: Polymersation catalysts, such as peroxy or azo compounds, strong acids, Alkalis and oxidizing agents.
- HAZARDOUS DECOMPOSITION PRODUCTS(S):** Does not decompose up to auto-ignition temperature.
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SECTION XI TOXICOLOGICAL INFORMATION

- INHALATION:** Irritating to respiratory system. High atmospheric concentrations may lead to irritation of the respiratory tract, dizziness, headache and anesthetic effects.
- SKIN:** May cause sensitization by skin contact. Irritating to skin. Repeated and/of prolonged contact may cause dermatitis.
- EYE:** Irritating to eyes. High vapor concentration will cause irritation.
- INGESTION:** Low oral toxicity, but ingestion may cause irritation of the gastrointestinal tract.
- LONG TERM EXPOSURE:** Repeated exposure to high levels produces adverse effects on the heart, lungs, liver, and kidneys.
- Repeated exposure of animals by inhalation to levels at or above the occupational exposure level produces adverse effects on the nasal epithelium (levels of 100 and 400 ppm).
- There is no reason to believe that methyl methacrylate represents a carcinogenic or mutagenic hazard to man based upon evidence from well conducted animal studies, relevant mutagenicity studies and adequate epidemiology studies in relevant cohorts.
- Recent studies in animals have shown that high exposures do not produce embryo or foetotoxic nor teratogenic effects in the presence of maternal toxicity.
- None of these effects are likely to occur in humans, provided exposure is maintained at or below the occupational exposure limit.
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Material Safety Data Sheet

Page 6/8

PREMIUM Acrylic Liquid Hardener

SECTION XII ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE AND DISTRIBUTION:

High tonnage material produced in wholly contained systems. Liquid with moderate volatility. The product is sparingly soluble in water.

The product has a low potential for bioaccumulation. This product is predicted to have high mobility in soil.

PERSISTENCE AND DEGRADATION:

Not readily biodegradable.

Chemical Oxygen Demand (COD) 88% (28 days).

Inherent Biodegradation:
Dissolved Organic Carbon Removal (DOC removal) > 95% (28 days)/

TOXICITY:

Low toxicity to fish.
LC50 (fish) Typically: >100 mg/l.
LC50 (fathead minnow) (96 hour) (static) 130 mg/l.

Harmful to aquatic invertebrates.
EC50 (Daphnia magna) (48 hour) 69 mg/l
Low toxicity to algae.

EC50 (selenastrum capricornutum) (96 hour) 170 mg/l.

EFFECT OF EFFLUENT TREATMENT:

The product is substantially removed in biological treatment processes.

SECTION XIII DISPOSAL CONSIDERATIONS

Disposal should be in accordance with local, state or national legislation. Incinerate under approved controlled conditions, using incinerators suitable for the disposal of methyl methacrylate. Decontaminate empty drums before recycling.

Material Safety Data Sheet

Page 7/8

PREMIUM Acrylic Liquid Hardener

SECTION XIV TRANSPORTATION

DOT/ UN SHIPPING NAME: Methyl Methacrylate Monomer, Inhibited

NA/UN NUMBER: UN1247

DOD/UNCLASS: 3

PACKING GROUP: II

LABEL: FLAMMABLE LIQUID

IATA CLASS: 3

IMDG CLASS: 3.2

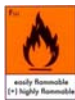
SECTION XV REGULATORY INFORMATION

EC REGULATIONS:

EINECS: all chemical listed

EEC Classification: HIGHLY FLAMMABLE AND IRRITANT

Symbol: Indication of Danger



F Highly Flammable



Xi Irritant

Risk Phrases: R11 Highly flammable

R36/37/38. Irritating to the eyes, respiratory system and skin.
R43 May cause sensitization by skin contact.

Material Safety Data Sheet

Page 8/8

PREMIUM Acrylic Liquid Hardener

Safety Phrases: S9 Keep container in well ventilated place.
S16 Keep away from sources of ignition. No smoking.
S33 Take precautionary measures against static discharges.
S29 Do not empty into drains.

CANADIAN REGULATIONS:

DSL: included

WHMIS Classification: B2 Flammable Liquid
D2B Toxic

TSCA: FOR USE IN FDA REGULATED PRODUCTS ONLY

This data sheet was prepared in accordance with Directive 93/112/EC.

SECTION XVI ADDITIONAL INFORMATION

FOR COMPANY USE

THE INFORMATION AND RECOMMENDATIONS SET FORTH HEREIN ARE TAKEN FROM SOURCES BELIEVED TO BE ACCURATE AS OF THE DATE HEREOR: HOWEVER PACE TECHNOLOGIES MAKES NO WARRANTY, EXPRESS OR IMPLIED WITH RESPECT TO THE ACCURACY OF THE INFORMATION OR THE SUITABILITY OF THE RECOMMENDATIONS, AND ASSUMES NO LIABILITY TO ANY USER THEREOF.

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