PRECISION SURFACES INTERNATIONAL, INC.
922 Ashland Houston, TX 77008-6734
713-426-2220 Fax: 713-426-2223

SAFETY DATA SHEET

SECTION 1: IDENTIFICATION

Product Name:	Acrylic Fast Set, Liquid Hardener
Product Identifier:	PSI-234-5L
Supplier:	Precision Surfaces International, Inc. 922 Ashland, Houston, TX 77008-6734
Emergency Telephone:	Infotrac 800-535-5053
Recommended Use:	Self-curing acrylic resin

SECTION 2: Hazard(s) Identification

Classification
Flammable liquids - Category 3
Skin corrosion / irritation - Category 2
Skin sensitization - Category 1B
Serious eye damage / eye irritation - Category 2A
STOT – single exposure - Category 3
Hazardous to the aquatic environment – Acute hazard - Category 1

Signal word
Warning

Hazard statements
H226 Flammable liquid and vapor.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H335 May cause respiratory irritation.

Label elements

Symbols

Appearance	Clear to slightly tinted
Physical State	Liquid
Odor	Characteristic

Precautionary statements – Prevention
P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.

P242 Use only non-sparking tools.
P241 Use explosion-proof electrical/ventilating/lighting equipment.
P243 Take precautionary measures against static discharge.
P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
P264 Wash hands thoroughly with soap and water 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.

Precautionary statements – Response
P302+P352 IF ON SKIN: Wash with plenty of water and soap.
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P312 Call a POISON CENTER or doctor/physician if you feel unwell.
P333+P313 If skin irritation or rash occurs, get medical advice/attention.
P362 Take off contaminated clothing and wash before reuse.
P363 Wash contaminated clothing before reuse.
P370+P378 In case of fire: Use alcohol-resistant foam, carbon dioxide or dry sand for extinction.

Precautionary statements – Storage
P235 Keep cool.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.

Precautionary statements – Disposal
Dispose of contents/container to hazardous waste in accordance with local, state or national legislation. Incinerate under approved controlled conditions, using incinerators suitable for the disposable of flammable organics.

Other information
Harmful to aquatic life.

SECTION 3: Composition/Information on Ingredients

Ingredient	C.A.S. No.	% by Weight
Iso-Butyl methacrylate	97-86-9	<90

Impurities and stabilizing additives
Standard grades contain inhibitors from among the following: 1000 ppm Maximum p-Methoxyphenol (CAS No. 150-76-5)

SECTION 4: First-aid Measures

First aid measures

Inhalation
Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

Skin Contact
IF ON SKIN (or hair): Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing wash before reuse.

Eye Contact
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get Medical advice/attention.

Ingestion
Do not induce vomiting. Rinse mouth. Obtain immediate medical attention.

Most important symptoms and effects, both acute and delayed
Causes serious eye irritation. Causes skin irritation. May cause respiratory irritation. May cause an allergic skin reaction.

Indication of any immediate medical attention and special treatment required
None necessary.

SECTION 5: Fire-fighting Measures

Extinguishing media

Suitable
In case of fire use water spray, foam, dry powder or CO2 for extinction. Keep containers cool by spraying with water if exposed to fire.

Unsuitable
Do not use water jet.

Special hazards arising from the chemical
Flammable liquid and vapor. May polymerize on heating. Sealed containers rupture explosively if hot.

Hazardous Combustion Products	Carbon oxides
Sensitivity to Mechanical Impact	No
Sensitivity to Static Discharge	Yes

Protective equipment and precautions for firefighters
A self-contained breathing apparatus and suitable protective clothing should be worn in fire conditions.

SECTION 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Personal precautions
ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Wear protective gloves and eye/face protection. Avoid breathing vapors. See Section 8.

Environmental precautions
Avoid release to the environment. Spillages or uncontrolled discharges into watercourses must be alerted to the appropriate regulatory body.

Methods and material for containment and clean-up

Method for containment

Collect spillage. Do not adsorb onto sawdust or other combustible materials. Transfer to a container for disposal or recovery. Use only non-sparking tools. See Section 13.

SECTION 7: Handling and Storage

Precautions for safe handling

Advice for safe handling
Do not eat, drink or smoke at the work place. Wash thoroughly after handling.
Avoid breathing vapors. Use only outdoors or in a well-ventilated area. The vapor is heavier than air; beware of pits and confined spaces.
Ground container and receiving equipment. Use explosion proof electrical equipment. Use only non-sparking tools. Take precautionary measures against static discharge.

Storage
Keep container tightly closed. Store in a well-ventilated place. Keep cool. Store locked up.
Keep away from heat, sparks, open flame, hot surfaces – No smoking. Protect from 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
Store temperatures not exceeding 25° C.

Incompatible materials
Polymerization catalysts, such as peroxy or azo compounds, strong acids, alkalis and oxidizing agents.

SECTION 8: Exposure Controls/Personal Protection

Exposure guidelines
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.

Chemical Name	OSHA PEL TWA	ACGIH TWA	ACGIH STEL	Company Standard TWA	Company Standard STEL
Iso-Butyl methacrylate 97-86-9	Not established	Not established	Not established	50 ppm	100 ppm

Appropriate engineering controls

Engineering controls
Do not eat, drink or smoke at the work place. Provide adequate ventilation, including appropriate local extraction, to ensure that the occupational exposure limit is not exceeded.

Individual protection measures, such as personal protective equipment

Eye/Face Protection
Wear eye/face protection. Safety spectacles/goggles/full face shield.

Skin/Hand Protection
Wear protective gloves. For splash protection: Butyl; EN 374. For immersion protection: Butyl; 0.7mm or greater; EN 374. Suitability of gloves should be confirmed with glove manufacturer. Change gloves if contamination occurs or

duration of activity exceeds breakthrough time. Breakthrough time of the glove material: refer to the information provided by the gloves' producer.

Respiratory Protection
Wear respiratory protection. Wear suitable respiratory 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.

SECTION 9: Physical and Chemical Properties

Information on basic physical and chemical properties

Physical State:	Liquid
Appearance:	Liquid
Color:	Clear to slightly tinted
Odor:	Characteristic
Odor Threshold:	0.015 – 0.06
pH:	Not Applicable
Melting Point/Freezing Point:	-35°V
Boiling Point/Boiling Range:	155°C
Flash Point:	49°C (Closed cup)
Evaporation Rate:	Not Available
Flammability (solid, gas):	N/A (liquid)
Flammability limits in air	
Flammable Limits (LEL):	8%
Flammable Limits (UEL):	2%
Vapor Pressure:	210 mm Hg @ 20°C
Vapor Density:	4.91 (Air=1)
Specific Gravity:	0.901 @ 15.5°C
Solubility in Water:	0.47 g/ @ 20°C
Solubility in other solvents:	Miscible with most organic solvents.
Partition coefficient:	2.95
Autoignition Temperature:	296°C
Decomposition Temperature:	Not Applicable
Kinematic Viscosity:	Not Applicable
Dynamic Viscosity:	Not Applicable
Explosive Properties:	Not Applicable
Oxidizing Properties:	Not Applicable

SECTION 10: Stability and Reactivity

Reactivity
Will exothermically polymerize in the presence of initiators.

Chemical Stability
Stable in the presence of inhibitor.

Conditions to avoid
Heat and direct sunlight.

Possibility of hazardous reactions

Susceptible to polymerization initiated by prolonged heating or the presence of catalyst.

Incompatible materials
Polymerization catalysts, such as peroxy or azo compounds, strong acids, alkalis and oxidizing agents.

Hazardous Decomposition Products
Does not decompose up to auto-ignition temperature.

SECTION 11: Toxicological Information

Acute Toxicity

Ingestion	Low oral toxicity, but ingestion may cause irritation of the gastrointestinal tract.
Ingestion toxicity data	LD50 (oral) > 9590 mg/Kg
Ingestion STOT – single exposure	Not applicable.
Inhalation	May cause respiratory irritation. May cause drowsiness and dizziness. Harmful if inhaled.
Inhalation toxicity data	LC50 (vapor) 5026 ppm (29.74 mg/l) (290 min)
Inhalation STOT – single exposure	Not applicable.
Respiratory sensitization data	Not a respiratory sensitizer.
Aspiration hazard data	Not an aspiration hazard.
Skin contact	May cause an allergic skin reaction. Causes skin irritation. Repeated and/or prolonged contact may cause dermatitis.
Skin contact toxicity data	LD50 (dermal) > 17760 mg/Kg
Skin contact STOT – single exposure	Not applicable.
Skin sensitization data	Evidence of contact sensitization in man.
Eye contact	Causes severe eye irritation.
Eye contact toxicity data	Slight irritant to rabbit eyes.
Eye STOT – single exposure	Not applicable.
Germ cell mutagenicity data	Salmonella typhimurium (TA 1535, 1537, 98, 100) negative (OECD 471)
Repeated exposure toxicity	
Chronic exposure	Exposure to high concentrations may produce adverse effects on the nasal epithelium. Repeated exposure produces adverse effects on the spleen.
STOT – repeated exposure data	NOAEL (inhalation) (rat) (28 day) 310 ppm (OECD 412) LOAEL (inhalation) (rat) (28 day) 952 ppm (OECD 412) NOAEC (oral) (rat) 30 mg/kg/day
Reproductive toxicity data	Some evidence of developmental toxicity at 1000 mg/kg/day in screening study (OECD 422). Decreased number of neonates, decreases in parturition and live birth indices and total number of offspring. NOEL for developmental toxicity is considered 300 mg/kg/day.
Carcinogenicity data	It is unlikely to present a carcinogenic hazard to man.
Other information	Not applicable

SECTION 12: Ecological Information

Ecotoxicity	Very toxic to aquatic life. LC50 (rainbow trout) (96 hour) (flow through) 20 mg/l EC50 (Daphnia magna) (48 hour) > 29 mg/l EC50 (Selenastrum capricornutum) (72 hour) 16 mg/l EC50 (Selenastrum capricornutum) (72 hour) 44 mg/l This product is substantially removed in biological treatment processes.
Persistence and degradability	Readily biodegradable 74% (28 days)
Bioaccumulation	The product has moderate potential for bioaccumulation.

Mobility	The product is predicted to have moderate mobility in soil.
Other adverse effects	None known

Section 13: Disposal Considerations

Avoid release to the environment. Decontaminate empty drums before recycling.

Disposal of wastes
Follow all local and national government regulations in disposing material or contaminated packaging.

For U.S. - Dispose of in accordance with federal, state and local regulations. When discarded, it is considered a hazardous waste by the EPA under RCRA. The reportable quantity for methyl methacrylate is 1000 lb. (40 CFR Part 302). Add excess inhibitor before disposing.

Contaminated Packaging
Dispose of all empty containers in accordance with local and national government regulations.

SECTION 14: Transport Information

DOT

UN / ID No	UN2283
Proper shipping name	Isobutyl methacrylate, stabilized
Hazard Class	3
Packing Group	III
ERG	130P

IATA

UN / ID No	UN2283
Proper shipping name	Isobutyl methacrylate, stabilized
Hazard Class	3
Packing Group	III

IMDG

UN / ID No	UN2283
Proper shipping name	Isobutyl methacrylate, stabilized
Hazard Class	3
Packing Group	III

SECTION 15: Regulatory Information

US Federal Regulations

Superfund reportable discharge

SARA 302 Extremely Hazardous Substances Not listed

SARA 311/312 Hazard Categories

Acute: Yes Chronic: No Fire: Yes Reactivity: Yes Pressure: No

US State Regulations

California Proposition 65 (California) Not listed

Canadian Regulations

WHMIS Classification	Class B, Division 3, Combustible Liquid Class D, Division 2, Subdivision B, Toxic Material Class F, Dangerously Reactive Material

Inventory Status

European Union	To the best of our knowledge all chemicals in this product comply with REACH regulations.
United States	Listed
Canada (DSL/NDSL)	Listed
Japan (ENCS)	Listed
Philippines (PICCS)	Listed
Australia (AICS)	Listed
South Korea (KECI)	Listed
China (IECSC)	Listed

NPCA - HMIS

Health: 2 **Flammability:** 2 **Reactivity:** 2

SECTION 16: Other Information

The above information and recommendation are believed to be accurate and reliable. However, no warranty, either expressed or implied, is made as to its accuracy or completeness and none is made as to fitness of this material for any purpose. The manufacturer or supplier shall not be liable for damages to person or property resulting from its use. Nothing herein shall be construed as a recommendation for use in violation of any patent.

Issue Date: 06/07/15 **Review Date:** 05/23/17