



MATERIAL SAFETY DATA SHEET

PART NUMBER 11 10 47 Acri-Kleer Liquid

SECTION 1 PRODUCT IDENTIFICATION AND MANUFACTURE

UN/ID No UN2283

Recommended use of the chemical and restrictions on use

Recommended Use Self-curing acrylic resin

Details of the supplier of the safety data sheet

Supplier Address

MetPrep Ltd
Curriers Close
Charter Avenue
Coventry
CV4 8AW

Tel: 02476 421222

Fax: 02476 421192

Email: sales@metprep.co.uk

Website: www.metprep.co.uk

SECTION 2 COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS No	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 3 SUBSTANCE HAZARD 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



Symbol

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

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

Other Information Harmful to aquatic life

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

Symptoms 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 needed

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.

Specific 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 on 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.
Check inhibitor levels every 6 months and return to original level.

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 CONTROL/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 and body 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	Odor	Characteristic
Appearance	Liquid	Odor threshold	0.015-0.06
Color	Clear to slightly tinted		
Property	Values	Remarks / Method	
pH	Not applicable		
Melting point / freezing point	-35°C		
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	
Upper flammability limit	8 %
Lower flammability limit	2 %
Vapor pressure	210mm Hg @ 20°C
Vapor density	4.91 (Air = 1)
Specific gravity	0.901 @15.5°C
Water solubility	0.47 g/l @ 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

Other information

SECTION 10 STABILITY AND REACTIVITY PROPERTIES

<u>Reactivity</u>	Will exothermically polymerize in the presence of initiators.
<u>Chemical stability</u>	Stable in the presence of inhibitor.
<u>Possibility of hazardous reactions</u>	Susceptible to polymerization initiated by prolonged heating or the presence of catalyst.
<u>Conditions to avoid</u>	Heat and direct sunlight.
<u>Incompatible materials</u>	Polymerization catalysts, such as peroxy or azo compounds, strong acids, alkalis and oxidizing agents.
<u>Hazardous decomposition products</u>	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	LD ₅₀ (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	LC ₅₀ (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	LD ₅₀ (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. LC ₅₀ (rainbow trout) (96 hour) (flow through) 20 mg/l EC ₅₀ (Daphnia magna) (48 hour) > 29 mg/l EC ₅₀ (Selenastrum capricornutum) (72 hour) 16 mg/l EC ₅₀ (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
EmS	F-E, S-D
Marine pollutant	No

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 Not listed

Substances

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 Hazards	Flammability	Reactivity
	2	2	2



SECTION 16	OTHER INFORMATION
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Issue Date 04-March -2015
Revision Date 17-June-2015
Revision Note Section 2 – revise classification categories, add hazardous component for labeling info; Section 13 - rephrase statement; Section 15 - add statement; Section 16 - update pending

Information to be updated in due course Hazard pictograms listed in this SDS to be added to product label.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release. It is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.