MULTI-TECH PRODUCTS

EXCELLENCE IN SURFACE REPAIR PRODUCTS

SAFETY DATA SHEET

Revision Date 03-15-2019 **Version** 1

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product Name	MMA Monomer Thinner
Product Description	Paint Thinner-reducer for MMA System Base Coats and Clear Coat Low Voc
CAS No.	80-62-6
Identified use(s)	Manufacture Formulation and re-packing Use at industrial sites Professional end use in formulations.
Uses advised against	Mixtures containing unreacted liquid monomer intended to come into contact with skin or nails.
Manufacturer	JV ENT, LLC (DBA: Multi-Tech Products) 1177 N Red Gum Street Anaheim, CA 92806 Phone: (800) 218-2066 orders@multitechproducts.com
Emergency Phone No.	1-800-424-9300 (CHEMTREC) 1-703-527-3887 (International)

2. HAZARDS IDENTIFICATION

Hazard classification	Flammable liquid Category 2. Skin corrosion / irritation Category 2. Skin sensitization Category 1. STOT - single exposure Category 3 Hazardous to the aquatic environment - Acute hazard Category 3.

Label elements

Signal word	Danger
Hazard statement(s)	H225: Highly flammable liquid and vapor. H315: Causes skin irritation. H317: May cause an allergic skin reaction. H335: May cause respiratory irritation. H402: Harmful to aquatic life.

Precautionary statement(s)	P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. 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. P261: Avoid breathing vapors. P264: Wash 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. P273: Avoid release to the environment. P280: Wear protective gloves/protective clothing/eye protection/face protection. P302+P352: IF ON SKIN: Wash with plenty of water. P303 + P361 + P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P304 + P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing. P312: Call a POISON CENTER/doctor if you feel unwell. P333+P313: If skin irritation or rash occurs: Get medical advice/attention. P362: Take off contaminated clothing and wash it before reuse. P370 + P378: In case of fire, use water spray, foam, dry powder or CO_2 for extinction. 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. P501: 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 disposal of flammable organics.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical identity of the substance	Methyl methacrylate
Common name(s), synonym(s) of the substance	Stabilised methyl methacrylate monomer; 2-propenoic acid, 2-methyl-, methyl ester; MMA; MMM.
CAS No.	80-62-6
Impurities and stabilizing additives	Standard grades contain inhibitors from among the following: 8000 ppm Maximum Phenothiazine (CAS No. 92-84-2) Hydroquinone (CAS No. 123-31-9) p-Methoxyphenol (CAS No. 150-76-5) 2,4-Dimethyl-6-t-butylphenol (CAS No. 1879-09-0) Octadecyl 3,5-di-tert-butyl-4-hydroxycinnamate (CAS No. 2082-79-3)

Substances in the product which may present a health or environmental hazard, or which have been assigned occupational exposure limits, are detailed below.

Substance identity	%W/W	CAS No.
Methyl methacrylate	>99	80-62-6

4. FIRST AID MEASURES

Description of first aid measures

Inhalation	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTRE or doctor if you feel unwell.
Skin Contact	IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical attention. Take off contaminated clothing and 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. Get immediate medical attention.
Ingestion	IF SWALLOWED: rinse mouth. Do NOT induce vomiting. Get immediate medical attention.

Most important symptoms and effects, both acute and delayed

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.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	In case of fire, use water spray, foam, dry powder or CO_2 for extinction. Keep containers cool by spraying with water if exposed to fire.
Unsuitable Extinguishing Media	Do not use water jet.
Special hazards arising from the substance or mixture	Highly flammable liquid and vapor. May polymerize on heating. Sealed containers may rupture explosively if hot.
Special protective equipment and precautions for fire fighters	A self contained breathing apparatus and suitable protective clothing should be worn in fire conditions.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Eliminate sources of ignition. 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 materials for containment and cleaning up	Collect spillage. Do not adsorb onto sawdust or other combustible materials. Transfer to a container for disposal or recovery. Use only non-sparking tools.
Other advice	See Section: 8, 13

7. HANDLING AND STORAGE

HANDLING	Do not eat, drink or smoke at the work place. Wash thoroughly after handling. Avoid contact with skin and eyes. 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, hot surfaces, sparks, open flames and other ignition sources. 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 (°C):	<104°F (40°C) Preferably not exceeding 86°F (30°C).
Incompatible materials:	Polymerization catalysts, such as peroxy or azo compounds, strong acids, alkalis and oxidizing agents. Oxides and salts of transition metals. Organic Nitrogen containing compounds. Cyclohexanone/Cyclohexenol tautomer.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Substance	CAS No.	OSHA PEL TWA	ACGIH TWA	ACGIH STEL	Company Std. TWA	Company Std. STEL
Methyl methacrylate	80-62-6	100 ppm 410 mg/m³	50 ppm (205 mg/m³)	100 ppm (410 mg/m³) (SEN;A4)	50 ppm	100 ppm

Appropriate 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. 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.

Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

Wear eye/face protection. Safety spectacles/goggles/full face shield.

Skin protection

Wear protective gloves.
For splash protection: Butyl; EN 374.
For immersion protection: Butyl; 0.7 mm or greater; EN 374.
See the Methacrylate Monomers Safe Use of Gloves Best Practice Guidelines.
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 protective equipment if exposure to levels above the occupational exposure limit is likely. A suitable mask with filter type A (EN141 or EN405) may be appropriate. In the event of formation of particularly high levels of vapor a self contained breathing apparatus may be appropriate.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	Liquid.
Color	Clear/colorless.
Odor	Characteristic strong and acrid.
Odor Threshold (ppm)	0.75
pH (Value)	Not applicable.
Melting Point (°C)	-48
Boiling Point (°C)	100.36
Flash Point (°C)	10 [Closed cup]
Relative Evaporation Rate (Ether = 1)	Not available.
Flammability (solid, gas)	Not applicable.
Flammable Limits (Lower) (%v/v)	2.1
Flammable Limits (Upper) (%v/v)	12.5
Vapor pressure (Pascal)	3700 at 68°F (20°C)
Vapor Density (Air=1)	3.5
Solubility (Water)	Slightly soluble. 1.53g/100g at 68°F (20°C)
Solubility (Other)	Miscible with most organic solvents.
Partition Coefficient (n-Octanol/water)	1.38
Auto Ignition Temperature (°C)	435
Decomposition Temperature (°C)	Not applicable.
Viscosity (mPa. s)	0.53 at 68°F (20°C)
Explosive Properties	Not applicable.
Oxidizing properties	Not applicable.
Density (g/ml)	0.94 at 68°F (20°C)
Minimum Ignition Energy (mJ)	0.89 - 0.97 at 73.5°F (23°C)
Refractive Index	1.412
Heat of Polymerization	54 kJ/mol
Heat of Vaporization	39.5 kJ/mol
Dielectric Constant	7.89 at 68°F (20°C)
Specific heat	1.9 kJ/kg -K
Electrical resistivity	9.311 x 10^9 Ohm.cm at 77°F (25°C)
Electrical conductivity	10700 pS/m
Electrical relaxation time	11.7 ps
Variation of density with temperature	-0.00117 g/cm³ per °C
Self accelerating polymerization temperature (°C)	>55

10. STABILITY AND REACTIVITY

Reactivity	Will exothermically polymerise in the presence of initiators.
Chemical stability	Stable in the presence of inhibitor and oxygen.
Possibility of hazardous reactions	Susceptible to polymerisation initiated by prolonged storage or the presence of catalyst. Self accelerating polymerization temperature (°C) : >55
Conditions to avoid	Heat and direct sunlight.
Incompatible materials	Polymerization catalysts, such as peroxy or azo compounds, strong acids, alkalis and oxidizing agents. Oxides and salts of transition metals. Organic Nitrogen containing compounds. Cyclohexanone/Cyclohexenol tautomer.
Hazardous decomposition product(s)	Does not decompose up to auto-ignition temperature.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Ingestion	Based upon the available data, the classification criteria are not met. Low oral toxicity, but ingestion may cause irritation of the gastrointestinal tract.
Ingestion toxicity data	LD50 (oral) >5000 mg/kg
Inhalation	Based upon the available data, the classification criteria are not met. May cause drowsiness and dizziness.
Inhalation toxicity data	LC50 (vapor) 7093 ppm (29.8 mg/l)(4 hour(s))
Skin Contact	Based upon the available data, the classification criteria are not met.
Skin contact toxicity data	LD50 (dermal) >5000 mg/kg
Skin corrosion/irritation	Causes skin irritation. Repeated and/or prolonged contact may cause dermatitis. Moderate irritant to rabbit skin.
Serious eye damage/irritation	Based upon the available data, the classification criteria are not met. High vapor concentration will cause irritation. Slight irritant to rabbit eyes. (OECD 405)
Skin sensitization data	May cause an allergic skin reaction. Skin sensitisation has been reported in studies with mice (OECD 429). Evidence of contact sensitization in man.
Respiratory sensitization data	Not a respiratory sensitizer. Irritant to the respiratory system and high concentrations may aggravate pre-existing conditions.
Aspiration hazard	Based upon the available data, the classification criteria are not met.
STOT - single exposure	May cause respiratory irritation. Exposure to high concentrations may produce adverse effects on the nasal epithelium.
STOT - repeated exposure	Based upon the available data, the classification criteria are not met. NOEL (oral) (rat) (104 weeks) >2000 ppm NOAEC (inhalation) (rat) (104 weeks) 100 ppm (OECD 453) NOAEC (inhalation) (mouse) (14 weeks) 1000 ppm (OECD 412) 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 400ppm).
Germ cell mutagenicity	Based upon the available data, the classification criteria are not met. In vitro Methyl methacrylate has the potential for induction of mutagenic effects, esp. clastogenicity, however this potential is limited to high doses with strong toxic effects. On the basis of the lack of such effects in vivo Methyl methacrylate is not classified for mutagenicity. Salmonella typhimurium (TA1535, 1537, 97, 98, 100) negative (OECD 471) Rodent Dominant Lethal Test negative (OECD 478) In vitro mammalian erythrocyte micronucleus test negative (OECD 474) In vitro mammalian chromosomal aberration test positive (OECD 473) In vitro mammalian cell gene mutation test positive (OECD 476)
Reproductive toxicity	Based upon the available data, the classification criteria are not met. NOAEC (Fetotoxicity, Teratogenicity) (inhalation) (rat) > 2028 ppm (OECD 414) NOAEL (Developmental Toxicity) (oral) (rabbit) 400 mg/kg Body weight
Carcinogenicity	Based upon the available data, the classification criteria are not met. No evidence of carcinogenicity. (OECD 451)

12. ECOLOGICAL INFORMATION

Ecotoxicity	Harmful to aquatic life. LC50 (fish) (typically) >100 mg/l LC50 (fathead minnow) (96 hour) (static) 130 mg/l EC50 (Daphnia magna) (48 hour) 69 mg/l EC50 (selenastrum capricornutum) (96 hour) 170 mg/l NOEC (zebra fish) (35 day) (flow through) 8.4 mg/l
Persistence and degradability	Readily biodegradable. Chemical Oxygen Demand (COD): 88% (28 days) Inherent Biodegradation: Dissolved Organic Carbon Removal (DOC removal): >95% (28 days) The substance is substantially removed in biological treatment processes.
Bioaccumulative potential	The product has low potential for bioaccumulation.
Mobility in soil	The product is predicted to have high mobility in soil.
Other adverse effects	None known.

13. DISPOSAL CONSIDERATIONS

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

Disposal methods	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 disposal of flammable organics.

14. TRANSPORT INFORMATION

UN No.	1247
Proper Shipping Name	METHYL METHACRYLATE MONOMER, STABILIZED If material is shipped in quantities greater than 1000 lb. per container, the Proper Shipping Name is RQ METHYL METHACRYLATE MONOMER, STABILIZED
Class	3
Packing group	II
Environmental hazards	No.
Marine Pollutant :	No.
Special precautions for user	No special requirements
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	See below
Ship type	2
Pollution category	Y
Reportable Quantity (RQ)	1000 lb
TDG Class	3.2 (9.2)
TMD Packing Group	II

15. REGULATORY INFORMATION

US Federal Regulations

Superfund reportable discharge	1000 lb
SARA 302 - Extremely Hazardous Substances	Not listed
SARA 311/312 - Hazard Categories	
Acute	Yes
Chronic	No.
Fire	Yes
Reactivity	Yes
Pressure	No.
SARA 313 - Toxic Chemicals	Listed.

US State Regulations

California	SUBSTANCES KNOWN TO THE STATE OF CALIFORNIA TO CAUSE BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM Not listed SUBSTANCES KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER Not listed

16. OTHER INFORMATION

The following sections contain revisions or new statements:	1, 8, 9, 10, 11, 12, 15
Date of preparation:	18 -September- 2020

Inventory Status

European Union	All chemicals in this product comply with REACH regulations. If importing material to the EU, please contact your supplier to ensure all registered substance volumes are supported.
United States (TSCA)	All chemicals in this product comply with TSCA rules and regulations including TSCA Section 5 (Inventory Rules).
Canada (DSL/NDSL)	Listed in DSL
Japan (ENCS)	Listed in ENCS
Philippines (PICCS)	Listed in PICCS
Australia (AICS)	Listed in AICS
South Korea (KECI)	Listed in KECI
China (IECSC)	Listed in IECSC
Taiwan (TCSI)	Listed in TCSI
New Zealand (NZIoC)	All components listed or exempt.

Compliance with other Regulatory Chemical Inventories cannot be assumed, please contact supplier for further information.

LEGEND

Note: Not all of the following are necessarily contained in this Safety Data Sheet:
LTEL: Long Term Exposure Limit
STEL: Short Term Exposure Limit
TWA: Time Weighted Average
PEL: Permissible Exposure Levels
OSHA: Occupational Safety and Health Administration
SARA: Superfund Amendments and Reauthorisation Act
WHMIS: Worker Hazardous Materials Information System
A4: Not Classifiable as a Human Carcinogen: Agents which cause concern that they could be carcinogenic for humans but which cannot be assessed conclusively because of the lack of data. In vitro or animal studies do not provide indications of carcinogenicity which are sufficient to classify the agent into one of the other categories.
R: Respirable particulate matter

Revision Date **06-02-2020**

Revision Note
No information available

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 a guidance for safe handling, use, processing, storage, transportation, disposal and release and 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. Shipping information may vary based upon container size and shipping destination. Each user of this material needs to evaluate the conditions of use and design the appropriate protective mechanisms to prevent employee exposures, property damage, or release to the environment. The manufacturer assumes no responsibility for injury to the recipient or third persons, or for any damages to any property resulting from misuse of the product.

End of Safety Data Sheet