RES-TEK
Acrylic Flooring & Concrete Repair Solutions

RT-MMA Cleaner

SAFETY DATA SHEET

OSHA HCS (29 CFR 1910.1200)

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Chemical Name	Methyl Methacrylate – (Chemically stabilized)
Product Name **/** Trade Name	RT-MMA Cleaner
CAS No.	80-62-6

Relevant identified uses of the substance or mixture and uses advised against

Identified Use(s)	Industrial Cleaning Solvent
Uses Advised Against	None

Details of the supplier of the safety data sheet

Company Identification	Res-Tek, Inc. 110 Riverside Drive Cartersville, Georgia 30120 United States of America
Telephone	1-888-737-8351 / 1-770-427-4034

Emergency telephone number

CHEMTREC 24 hr. 1-800-424-9300 / 1 (703) 527-3887
(Collect calls accepted)

SECTION 2: HAZARDS IDENTIFICATION

Classification of the substance or mixture

OSHA HCS (29 CFR 1910.1200) — Flam. Liq. 2; Skin corros / Irrit. 2; Skin Sens 1B; STOT SE (Inhalation) 3; Aquatic Acute 3

Label elements

Hazard Symbol

Signal Word(s) — **DANGER**

Hazard Statement(s)

Highly flammable liquid and vapor.
Causes skin irritation.
May cause an allergic skin reaction.
May cause respiratory irritation.
Harmful to aquatic life.

Precautionary Statement(s)

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.
No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting/equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Avoid breathing vapors.
Wash thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing should not be allowed out of the workplace.

	Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.
Other hazards	Polymerization with heat evolution may occur in the presence of radical forming substances (e.g. peroxides), reducing substances, and/or heavy metal ions. Take precautionary measures against static discharge.
Additional Information	None

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Composition/information on ingredients	%W/W	CAS No.	Hazard Statement(s)
Methyl methacrylate	>99.9	80-62-6	Flam. Liq. 2; H225 Skin Irrit. 2; H315 Skin Sens. 1B; H317 STOT SE 3; H335 Aquatic Acute 3; H402

For full text of H phrases see section 16.

Additional Information - None

SECTION 4: FIRST AID MEASURES

Description of first aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If breathing is labored, administer oxygen. If symptoms persist, obtain medical attention.
Skin Contact	Take off immediately all contaminated clothing. Rinse skin with water/shower. If irritation (redness, rash, blistering) develops, get medical attention. Wash contaminated clothing before reuse.
Eye Contact	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	Rinse mouth. Do not induce vomiting unless directed to do so by medical personnel. Get immediate medical attention.
Most important symptoms and effects, both acute and delayed	Headache, confusion. Causes skin and eye irritation, sensitisation, nausea, dermatitis. May cause irritations of the respiratory tract. Inhalation can lead to irritation of the mucous membrane
Indication of any immediate medical attention and special treatment needed	None anticipated.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media	Extinguish with water spray, foam, dry chemical, or carbon dioxide. Keep containers cool by spraying with water if exposed to fire.
Unsuitable Extinguishing Media	Water jet.
Special hazards arising from the substance or mixture	Highly flammable liquid and vapor. Vapors can travel to a source of ignition and flash back. Explosive mixtures may occur at temperatures at or above the flashpoint. Vapors are heavier than air and may spread along floors. May polymerize on heating. Sealed containers may rupture explosively if hot.

Advice for fire-fighters

Fire fighters should wear complete protective clothing including self-contained breathing apparatus.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Eliminate all ignition sources if safe to do so. Put on protective equipment before entering danger area. Wear protective gloves/protective clothing/eye protection/face protection. In case of inadequate ventilation wear respiratory protection.

Environmental precautions

Contain spillages with diatomaceous earth, sand, acid absorbent or any suitable adsorbent material. Do not absorb onto sawdust or other combustible materials. Do not allow to enter drains, sewers or watercourses.

Methods and material for containment and cleaning up

Collect spillage. Transfer to a container for disposal or recovery. Use only non-sparking tools.

Reference to other sections

See Sections 8 and 13.

Additional Information

None

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharge. Ground/bond container and receiving equipment. Use only non-sparking tools. Use explosion-proof electrical / ventilating / lighting / equipment. Keep container tightly closed.Wear protective gloves/protective clothing/eye protection/face protection. Wash hands and exposed skin after use. Do not breathe dust / fume / gas / mist / vapors / spray. Contaminated work clothing should not be allowed out of the workplace. Work in well ventilated zones or use proper respiratory protection. Provide good room ventilation even at ground level (vapors are heavier than air).

Conditions for safe storage, including any incompatibilities

Storage temperature

Store at room temperature not exceeding 86°F. Keep container tightly closed and in a well-ventilated place. Keep out of 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.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Occupational Exposure Limits

SUBSTANCE.	CAS No.	(8hr TWA) PEL (OSHA)	(8hr TWA) TLV (ACGIH)	(STEL) PEL (OSHA)	(STEL) TLV (ACGIH)	Note:
Methyl methacrylate	80-62-6	100 ppm	50 ppm	-----	100 ppm	-----

-TWA: Time Weighted Average; PEL: Permissible Exposure Limit; TLV: Threshold Limit Value; STEL: Short Term Exposure Limit;

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.

Personal protection equipment

Eye/face protection 	Wear protective eyewear (goggles, face shield, or safety glasses).
Skin protection (Hand protection/ Other)  	Gloves (Butyl rubber). Check with protective equipment manufacturer's data. Gloves should be changed regularly to avoid permeation problems.
Respiratory protection 	In case of inadequate ventilation wear respiratory protection. Air-purifying respirator with organic vapor cartridges may provide sufficient protection. Check with protective equipment manufacturer's data.
Thermal hazards	Not normally required.
Environmental Exposure Controls	Do not allow to enter drains, sewers or watercourses.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Liquid
Color.	Clear/colorless
Odor	Sweet Ester-like
Odor Threshold (ppm)	0.5-1.0
pH (Value)	Not applicable
Melting Point (°C) / Freezing Point (°C)	- 48 (-54 °F)
Boiling point/boiling range (°C):	100.5 (212.9 °F)
Flash Point (°C)	10 (50°F) (Closed Cup)
Evaporation Rate	3.1 (Butyl acetate = 1)
Flammability (solid, gas)	Not applicable.
Explosive Limit Ranges (%v/v)	Flammable Lower Limits = 2.1 Flammable Upper Limits= 12.5
Vapor pressure (mmHg)	27 at 20°C (68°F)
Vapor Density (Air=1)	3.5
Relative Density (g/ml)	0.949 at 20 °C (68°F) (7.920lb/gal at 20 °C)
Specific Gravity	0.96
Solubility (Water)	Slightly soluble. 1.6% at 20°C (68°F)
Solubility (Other)	Miscible with most organic solvents
Partition Coefficient (n-Octanol/water)	1.38
Auto Ignition Point (°C)	421 (790°F)
Decomposition Temperature (°C)	Not applicable
Dynamic Viscosity (Brookfield)	0.53 mPa·s at 20°C (68°F)
Explosive properties	Not explosive.
Minimum Ignition Energy (mJ)	0.89 – 0.97 at 23°C (73.5°F)
Refractive Index	1.412
Heat of Polymerization	54 kJ/mol
Heat of Vaporization	39.5 kJ/mol
Dielectric Constant	7.89 at 20
Specific Heat	1.89 kJ/kg·K
Electrical resistivity	9.311 x 10^9 Ohm·cm at 25°C (77°F)
Electrical conductivity	10700 pS/m
Electrical relaxation time	11.7 ps
Variation of dens9ity with temperature	-0.00117 g/cm^3·°C

Oxidizing properties	Not oxidizing.
Other information	None

SECTION 10: STABILITY AND REACTIVITY

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

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes: Inhalation**,** Skin Contact**,** Eye Contact.

Information on toxicological effects

Toxicokinetics, metabolism and distribution	The substance is rapidly metabolized.
Ingestion	Low oral toxicity, but ingestion may cause irritation of the gastrointestinal tract.
Ingestion toxicity data	LD50 (oral) > 5000 mg/Kg
Inhalation	May cause drowsiness and dizziness.
Inhalation toxicity data	LC50 (vapor) 7093 ppm (29.8 mg/l) (4hr).
Skin contact toxicity data	LD50 (dermal) > 5000 mg/Kg.
Skin corrosion/irritation	Causes skin irritation. Severe irritant to rabbit skin. Repeated and/or prolonged contact may cause dermatitis.
Serious eye damage/irritation	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 guinea pigs. (OECD 406). 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 data	Not an aspiration hazard.
STOT - single exposure	May cause respiratory irritation. Exposure to high concentrations may produce adverse effects on the nasal epithelium.
STOT - repeated exposure	Not classified.
Reproductive toxicity data	NOAEC (mouse) = 9000 ppm NOAEC (rat) > 2028 ppm
Germ cell mutagenicity data	Salmonella typhimurium (TA1535, 1537, 97, 98, 100) negative (OECD 471).
Carcinogenicity data	No evidence of carcinogenicity. (OECD 451).

NTP	IARC	ACGIH	OSHA
No.	No.	No.	No.

Repeated exposure toxicity

Chronic 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 400ppm). 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. NOEL (oral) (rat) (104 weeks) > 2000 ppm NOAEL (inhalation) (rat) (2 Years) 25 ppm. Findings: Damage to mucous membranes in the nose at 400 ppm. NOAEC (inhalation) (rat) (104 weeks) 100 ppm (OECD 453) NOAEC (inhalation) (mouse) (14 weeks) 1000 ppm (OECD 412) NOAL: (drinking water) (rat) (2 Years) 2000 ppm. Findings: no toxic effects.
Toxicity on Repeated Administration	Rat, inhalation, 2 Years NOAEL 25 ppm. Findings: Damage to mucous membranes in the nose at 400 ppm. Rat, in drinking water, 2 Years NOAL 2000 ppm. Findings: no toxic effects.
General information	Avoid contact with the skin and eyes and inhalation of the product vapors.
Other information	None.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

Acute 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 NOEC (zebra fish) (35 day) (flow through) 8.4 mg/l The product is substantially removed in biological treatment processes.
Long Term Toxicity	Not available.
Persistence and degradability	Readily biodegradable. Chemical Oxygen Demand (COD): 88% (28 days). Inherent Biodegradation: Dissolved Organic Carbon Removal (DOC removal): >95% (28 days).
Bioaccumulative potential	The product has low potential for bioaccumulation.
Mobility in soil	The product is predicted to have high mobility in soil.
Results of PBT and vPvB assessment	Not classified as PBT or vPvB.
Other adverse effects	None known.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods	Disposal should be in accordance with local, state or national legislation. Consult an accredited waste disposal contractor or the local authority for advice.
Additional Information	None known.

SECTION 14: TRANSPORT INFORMATION

	Land transport (U.S. DOT)	Sea transport (IMDG)	Air transport (ICAO/IATA)
UN number	UN 1247	UN 1247	UN 1247
Proper Shipping Name	Methyl methacrylate monomer, stabilized For quantities >1000 lb RQ Methyl Methacrylate Monomer, Stabilized	Methyl methacrylate monomer, stabilized	Methyl methacrylate monomer, stabilized
Transport hazard class(es)	3	3	3
Packing group	II	II	II
Environmental hazards (Marine pollutant)	No	No	No
Special precautions for user	See below	None assigned	None assigned

Special precautions for user (DOT) ROAD: DOTHAZREG# 073106 550 010O STCC# 49-072-50
(CFR): DOT EMERGENCY RESPONSE GUIDE 129 DRIVER HAS E.R. INFO IMMEDIATELY AVAILABLE_____
Rail: DOTHAZREG# 073106 550 010O STCC# 49-072-50
(CFR) DOT EMERGENCY RESPONSE GUIDE 129 DRIVER HAS E.R. INFO IMMEDIATELY AVAILABLE_____

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:
Ship Type: 2
Pollution category: Y
Reportable Quantity (RQ): 1000 lb
TDG Class: 3.2 (9.2)
TMD Packing Group: II

* Reportable Quantity (RQ) substance

SECTION 15: REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture:

TSCA (Toxic Substance Control Act) - Inventory Status**:** All components listed or polymer exempt.

Designated Hazardous Substances and Reportable Quantities (40 CFR 302.4):

Chemical Name	CAS No.	Typical %wt.	RQ (Pounds)
Methyl methacrylate	80-62-6	>99.9	1000

SARA 311/312 - Hazard Categories:

☒ Fire ☐ Sudden Release ☒ Reactivity ☒ Immediate (acute) ☐ Chronic (delayed)

SARA 313 - Toxic Chemicals (40 CFR 372):

Chemical Name	CAS No.	Typical %wt.
Methyl methacrylate	80-62-6	>99.9

SARA 302 - Extremely Hazardous Substances(40 CFR 355):

Chemical Name	CAS No.	Typical %wt.	RQ (Pounds)	TPQ (Pounds)
None	-----	-----	-----	-----

Proposition 65 (California):

Chemical Name	CAS No.	Typical %wt.	Hazards
None	-----	-----	-----

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: 1 - 16.

Date of preparation: April 25, 2018

Hazard Statement(s) Listed in: SECTION 3

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.

Additional Information: None.

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