Material Safety Data Sheet

Update: 08/25/2014
Version: 1.1

1. Chemical Product and Company Identification

Epoxy.com # 697 MMA SL/Trowel Resin

Supplier:

Epoxy Systems, Inc.
20774 W Pennsylvania Ave.
Dunnellon, Florida 34431
USA

352-489-1666 (phone)
352,-489-1625 (fax)

Product Information Number 1- 352-489-1666
24 Hour Emergency Number, PERS 1-800-633-8353

Product Use: binder for floor-coating

2. Composition/Information on Ingredients

This material is classified as hazardous under OSHA regulations.

Ingredients	CAS Reg. No.	Weight %
methyl methacrylate	80-62-6	30 - 60
2-ethylhexyl acrylate	103-11-7	10 - 30
butyldiglycol methacrylate	7328-22-5	10 - 30
substituted tertiary amine	trade secret	0.1 - 1
acrylic polymer	trade secret	15 - 40

NJTSR # 56705700001-6782P

See Section 8, Exposure Controls/Personal Protection

3. Hazards Identification

Emergency Overview

Color: colorless, highly turbid
Appearance: low-viscosity
Odor: sweet, ester-like

Flammable liquid and vapor.
May cause eye, skin and respiratory tract irritation.
May cause sensitisation by skin contact.
Danger of bursting of closed systems due to vigorous exothermic polymerization.

Primary Routes of Exposure
Skin contact
Eye contact
Inhalation

Potential Health Effects

Inhalation
Inhalation may cause the following:
- irritation of the mucous membrane and upper respiratory tract
- headache
- nausea

Eye Contact
Causes eye irritation.

Skin Contact
Direct contact with material can cause the following:
- irritation
- sensitization

Prolonged or repeated skin contact can cause the following:
- defatting
- dermatitis

May be absorbed through the skin.

Ingestion
This product has a low order of acute oral toxicity based on animal test data.

Potential Environmental Effects
See SECTION 12, Ecological Information

4. First Aid Measures

First Aid Procedures

Inhalation
Remove to fresh air. If breathing is difficult, get medical attention.

Eye Contact
In case of contact, immediately flush eyes with plenty of water. Get immediate medical attention.

Skin Contact
Immediately wash skin with soap and plenty of water. Remove contaminated clothing and shoes. If irritation persists, call a physician. Wash clothing before reuse.

Ingestion
If symptoms develop get medical attention. Only induce vomiting if directed by a physician. Never give anything by mouth to an unconscious person.

Note to Physician
Excessive or prolonged exposure can cause the following: , Headache, confusion, irritation, Product has dermal defatting effect

5. Fire-Fighting Measures

Flash point	10 °C (DIN 51755) (methyl methacrylate) 50 °F (DIN 51755) (methyl methacrylate)
Ignition temperature	430 °C (DIN 51794) (methyl methacrylate) 806 °F (DIN 51794) (methyl methacrylate)
Lower explosion limit	2.1 %(V) at 10,5°C / 33,8°F (MMA)
Upper explosion limit	12.5 %(V) (methyl methacrylate)
OSHA Flammability Classification	Flammable liquid

Other Flammable Properties

Flammable liquid. Vapors can travel to a source of ignition and flash back. Explosive mixtures may occur at temperatures at or above the flashpoint.

Unusual Hazards

May be released in case of fire: carbon monoxide, carbon dioxide, organic products of decomposition. -

Extinguishing Media

Use the following extinguishing media when fighting fires involving this material:
dry chemical - carbon dioxide - foam

Fire Fighting Procedures

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Containers can build up pressure if exposed to heat (fire). Cool with water spray.

6. Accidental Release Measures

Procedures

Remove sources of ignition and ventilate area. All equipment used when handling the product must be grounded. Absorb spill with inert material and place in a chemical waste container. Obey relevant local, state, provincial and federal laws and regulations. Do not contaminate any lakes, streams, ponds, groundwater or soil. See Material Safety Data Sheet section 8, Exposure Controls/Personal Protection.

7. Handling and Storage

Handling

Keep away from heat. Keep away from sparks, flames and other sources of ignition. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Avoid breathing vapor or mist. Use only with adequate ventilation. The need for grounding and bonding of containers in accordance with OSHA 29 CFR 1910.106 and NFPA 77 should be assessed for all product transfers. Container hazardous when empty. Follow all MSDS/label precautions even after the container is emptied. Emptied container retains vapor and product residue. Residual vapors might explode on ignition; do not apply heat, cut, drill, grind or weld on or near this container.

Storage

Keep in the original container at a temperature not exceeding 30 °C (86 °F). Fill the container by approximately 90 % only as oxygen (air) is required for stabilisation. With large storage containers make sure the oxygen (air) supply is sufficient to ensure stability. Store in a cool, dry place. Keep container closed. Protect from the action of light. Can polymerize with intense heat release.

Other

Improper disposal or re-use of this container may be dangerous and illegal.

8. Exposure Controls/Personal Protection

Exposure Limit Information

METHYL METHACRYLATE

(CAS Number 80-62-6)

Carcinogen designation(s) USA: EPA-NL; IARC-3; TLV-A4

Occupational Exposure Values :			Remark(s):
ACGIH TLV-TWA	50 ppm	205 mg/m3	Sensitiser
ACGIH TLV-STEL	100 ppm	410 mg/m3	Sensitiser
OSHA PEL-TWA	100 ppm	410 mg/m3	
OSHA PEL-STEL			not established
OEL-TWA (Alberta)	50 ppm	205 mg/m3	
OEL-STEL (Alberta)	100 ppm	410 mg/m3	
OEL-TWA (British Columbia)	50 ppm		Capable of causing respiratory, dermal or conjunctival sensitization.
OEL-STEL (British Columbia)	100 ppm		Capable of causing respiratory, dermal or conjunctival sensitization.
OEL-TWA (Ontario)	50 ppm		
OEL-STEL (Ontario)	100 ppm		
OEL-TWA (Quebec)	50 ppm	205 mg/m3	Sensitiser
OEL-STEL (Quebec)			not established
OEL-TWA (Mexico)	100 ppm	410 mg/m3	Carcinogen Category 4 - not classifiable as a human carcinogen
OEL-STEL (Mexico)	125 ppm	510 mg/m3	Carcinogen Category 4 - not classifiable as a human carcinogen

2-ETHYLHEXYL ACRYLATE

(CAS Number 103-11-7)

No Occupational Exposure Values established (ACGIH, OSHA, Canada and Mexico).

BUTYLDIGLYCOL METHACRYLATE

(CAS Number 7328-22-5)

No Occupational Exposure Values established (ACGIH, OSHA, Canada and Mexico).

STODDARD SOLVENT (WHITE OIL)

(CAS Number 8052-41-3)

Occupational Exposure Values :			Remark(s):
ACGIH TLV-TWA	100 ppm	525 mg/m3	
ACGIH TLV-STEL			not established
OSHA PEL-TWA	500 ppm	2,900 mg/m3	
OSHA PEL-STEL			not established

OEL-TWA (Alberta)	100 ppm	572 mg/m3	
OEL-STEL (Alberta)			not established
OEL-TWA (British Columbia)		290 mg/m3	
OEL-STEL (British Columbia)		580 mg/m3	
OEL-TWA (Ontario)		525 mg/m3	
OEL-STEL (Ontario)			not established
OEL-TWA (Quebec)	100 ppm	525 mg/m3	
OEL-STEL (Quebec)			not established
OEL-TWA (Mexico)	100 ppm	523 mg/m3	
OEL-STEL (Mexico)	200 ppm	1,050 mg/m3	

Engineering Controls (Ventilation)

Provide general and/or local exhaust ventilation to maintain airborne levels below the exposure limits in Section 8. Refer to the current edition of 'Industrial Ventilation: A Manual of Recommended Practice' published by the American Conference of Governmental Industrial Hygienists for information on the design, installation, use, and maintenance of exhaust systems.

Respiratory Protection

A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 or applicable federal/provincial requirements must be followed whenever workplace conditions warrant respirator use. NIOSH's "Respirator Decision Logic" may be useful in determining the suitability of various types of respirators.

Eye Protection

Use safety glasses (ANSI Z87.1 or approved equivalent).

Skin Protection

Use chemically resistant apron or other impervious clothing to avoid prolonged or repeated skin contact.

Hand Protection

butyl rubber gloves
Gloves should be replaced regularly, especially after extended contact with the product.
For each work-place a suitable glove type has to be selected.

Other Protective Equipment

A safety shower and eye wash fountain should be readily available. To identify additional Personal Protective Equipment (PPE) requirements, it is recommended that a hazard assessment in accordance with the OSHA PPE Standard (29CFR1910.132) be conducted before using this product.

9. Physical and Chemical Properties

Appearance	colorless, highly turbid
Physical state	low-viscosity
Odor	sweet, ester-like
Flash point	10 °C (DIN 51755) (methyl methacrylate) 50 °F (DIN 51755) (methyl methacrylate)
pH-value	not applicable
Viscosity (dynamic)	175 - 375 mPa·s at 23 °C / 73 °F (Brookfield)

Specific gravity (water = 1)	0.99 g/cm3 at 20 °C / 68 °F
Vapor density (air = 1)	> 1 at 20 °C / 68 °F
Vapor pressure	ca. 40 hPa (= mbar) at 20 °C / 68 °F (methyl methacrylate)
Melting Point	-48 °C / -54 °F at 1,013 hPa (= mbar) (methyl methacrylate)
Boiling Temperature	ca. 100 °C / 212 °F at 1,013 hPa (= mbar)
Solubility in water	ca. 20 g/l at 20 °C / 68 °F
n-Octanol/water partition coefficient	not available
Evaporation rate	> 1(butyl acetate = 1)
Odor threshold	not available
Further information	none

See Section 5, Fire Fighting Measures

10. Stability and Reactivity

Stability

This product is stable under normal storage conditions.

Conditions To Avoid

See 'Hazardous Polymerization' for conditions to avoid.

Incompatibility With Other Materials

Reducing agents. Tertiary amines. Heavy metals. peroxides Free radical initiators. oxidizing agents Mineral acids.

Hazardous Decomposition Products

None when used as directed.

Hazardous Polymerization

The product is normally supplied in a stabilized form. If the permissible storage period and/or storage temperature is noticeably exceeded, the product may polymerize with heat evolution.

11. Toxicological Information

Acute Oral Toxicity

LD50 rat, OECD 401 Related to substance: methyl methacrylate	> 5,000 mg/kg
LD50 rat Related to substance: 2-ethylhexyl acrylate	> 2,000 mg/kg

Acute Inhalational Toxicity

LC50 rat, 4 h Related to substance: methyl methacrylate	29.8 mg/l
LCLo mouse Related to substance: 2-ethylhexyl acrylate	0.6 mg/l

Acute Dermal Toxicity

LD50 rabbit Related to substance: methyl methacrylate	> 5,000 mg/kg

LD50 rabbit > 5,000 mg/kg
Related to substance: 2-ethylhexyl acrylate

Irritant Effect on the Skin

irritating

Properties of components in summary.
Related to substance: product

Irritant Effect on the Eyes

Contact with the eyes may cause irritation. Properties of components in summary.
Related to substance: product

Sensitization

In sensitization tests on guinea pigs with and without adjuvant, both positive and negative results were found. In humans various types of allergic reactions have been observed (symptoms: headache, eye irritations, skin affections).
Related to substance: methyl methacrylate

May cause sensitisation by skin contact.
Related to substance: 2-ethylhexyl acrylate

Toxicity on Repeated Administration

Dose ad which no adverse effects were observed (NOAEL). At higher doses adverse effects were observed.

rat, inhalation **NOAEL** 25 ppm
Findings: Damage to mucous membranes in the nose at 400 ppm
Related to substance: methyl methacrylate

rat, in drinking water **NOAEL** 2000 ppm
Findings: no toxic effects
Related to substance: methyl methacrylate

Mutagenicity

Positive as well as negative results in *in vitro* mutagenicity/ genotoxicity tests.
No experimental indication of genotoxicity *in vivo* available.
In summary not mutagenic according to internationally accepted criteria.
Related to substance: methyl methacrylate

Carcinogenicity

Non-carcinogenic in inhalation and feeding studies carried out on rats, mice and dogs.
Related to substance: methyl methacrylate

Reprotoxicity / teratogenicity

No indications of teratogenic effects in experimental animals.
Related to substance: methyl methacrylate

Further Information on Toxicology

There are no toxicological data available for the product as such. Avoid contact with the skin and eyes and inhalation of the product vapours.

12. Ecological Information

Information on Elimination (Persistence and Degradability)
Biodegradability

biodegradable
(monomer constituent)

Bioaccumulation

no evidence for hazardous properties

Ecotoxicological Effect

Fish Toxicity

LC50 Oncorhynchus mykiss, rainbow trout, OECD 203, flow through, GLP, 96 h	> 79 mg/l
Related to substance: methyl methacrylate	

Daphnia Toxicity

EC50 Daphnia magna, OECD 202, flow through, 48 h	69 mg/l
Related to substance: methyl methacrylate	
NOEC Daphnia magna, OECD 202 part 2, flow through, 21 d	37 mg/l
Related to substance: methyl methacrylate	
EC50 Daphnia magna, OECD 202 / ISO 6341 / 84/449/EEC V, C2, 48 d	17.45 mg/l
Related to substance: 2-ethylhexyl acrylate	

Algae Toxicity

EC3 Scenedesmus quadricauda, cell proliferation inhibition test, 8 d	37 mg/l
Related to substance: methyl methacrylate	

Bacteria Toxicity

EC0 Pseudomonas putida	100 mg/l
Related to substance: methyl methacrylate	

Further Information on Ecology

Prevent substance from entering soil, natural bodies of water and sewer systems.

13. Disposal Considerations

Procedures

Waste must be disposed of in accordance with federal, state and local regulations. Incineration is the preferred method. Empty containers must be handled with care due to product residue. DO NOT HEAT OR CUT THE EMPTY CONTAINER WITH ELECTRIC OR GAS TORCH.

14. Transport Information

US DOT Hazard Classification

Proper Shipping Name	RESIN SOLUTION
Hazard Class	3
ID/UN Number	1866
Packing Group	II

Canadian TDG Classification

Refer to the classification US DOT

Shipment by sea IMDG/GGVSee

UN number	1866
Class	3

EmS	F-E, S-E
Marine pollutant	No
Packaging group	II
Proper Shipping Name	RESIN SOLUTION

Air transport ICAO/IATA

UN number	1866
Class	3
Packing Group	II
Proper Shipping Name	RESIN SOLUTION

15. Regulatory Information

INVENTORY INFORMATION

REACH (EU)	preregistered, registered or exempted
TSCA (USA)	listed or exempted
DSL (CDN)	not listed
METI (J)	listed or exempted
ECL (KOR)	listed or exempted
IECSC (CN)	listed or exempted
HSNO (NZ)	listed or exempted HSR002669, Surface Coatings and Colorants (Flammable, Toxic [6.7]) Group Standard 2006

US FEDERAL REGULATORY INFORMATION

Component / CASRN	TPQ [lbs]	CERCLARQ [lbs] (40CFR302.4)	SARA 302 List of EHS	SARA 313 (40CFR372)	TSCA 12b
methyl methacrylate / 80-62-6	NONE	1000	NO	YES	NO

COMPONENT CLASSIFICATION UNDER CLEAN AIR ACT SECTION 112

Component / CASRN	Weight %	HAP	EHAP
methyl methacrylate / 80-62-6	30 - 60	YES	NO

PRODUCT CLASSIFICATION UNDER SECTION 311/312 OF SARA (40CFR370)

ACUTE, FIRE, REACTIVE,

US STATE REGULATORY INFORMATION

Component / CASRN	New Jersey RTK	Pennsylvania RTK	Massachusetts RTK	California Proposition 65 Cancer	California Proposition 65 Reproductive
methyl methacrylate / 80-62-6	YES	YES	YES	NO	NO
2-ethylhexyl acrylate / 103-11-7	YES	YES	YES	NO	NO
butyldiglycol methacrylate / 7328-22-5	NO	NO	NO	NO	NO
acrylic polymer / trade secret	NO	NO	NO	NO	NO
substituted tertiary amine / trade secret	NO	NO	NO	NO	NO

This product contains (a) chemical(s) known to the State of California to cause cancer and birth defects or other reproductive harm.

CANADIAN REGULATION

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulation and the MSDS contains all information required by the Controlled Products Regulations.

For Research and Development Only.
WHMIS: B2,D2B

Component / CASRN	NPRI
methyl methacrylate / 80-62-6	YES
2-ethylhexyl acrylate / 103-11-7	NO
methacrylic acid ester / trade secret	NO

16. Other Information

	Health	Flammability	Physical Hazard
HMIS-Ratings	2	3	2
NFPA-Ratings	2	3	2

HMIS Hazard Ratings	NFPA Hazard Ratings
4 = severe	4 = extreme
3 = serious	3 = high
2 = moderate	2 = moderate
1 = slight	1 = slight
0 = minimal	0 = insignificant
N = no rating for powders	N = no rating for powders
* = chronic health hazard	

This MSDS was prepared in accordance with ANSI Z400.1-1998.

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