Material Safety Data Sheet
acc. to ISO/DIS 11014

Printing date 10/27/2010 Reviewed on 10/27/2010

1 Identification of substance:

· **Product details:**

· **Trade name:** **Epoxy.com #698**

· **Application of the substance / the preparation** Coating

· **Manufacturer/Supplier:**
Epoxy Systems, Inc.
20774 West Pennsylvania Ave.
Dunnellon, FL 34431

Tel.: 352-489-1666

· **K. Fontaine**

· **Emergency information:** 800-633-8253

2 Composition/Data on components:

· **Chemical characterization**
· **Description:** methyl methacrylate resin

· **Dangerous components:**

CAS: 80-62-6 EINECS: 201-297-1	methyl methacrylate	Xi, F; R 11-37/38-43	25-50%
CAS: 103-11-7 EINECS: 203-080-7	2-ethylhexyl acrylate	Xi; R 37/38-43	10-25%
CAS: 23077-12-1 EINECS: 221-359-1	2,2'-[(4-methylphenyl)imino]bisethanol	Xn; R 22-36/38	< 2.5%
CAS: 28052-41-3 EINECS: 232-489-3	Stoddard-Lösungsmittel	Xn, N; R 10-51/53-65-66	< 2.5%

· **Additional information** For the wording of the listed risk phrases refer to section 16.

3 Hazards identification

· **Hazard description:**

Xi Irritant
F Highly flammable

· **Information pertaining to particular dangers for man and environment**
R 11 Highly flammable.
R 37/38 Irritating to respiratory system and skin.
R 43 May cause sensitization by skin contact.
· **Classification system**
The classification was made according to the latest editions of the EU-lists, and expanded upon from company and literature data.
· **NFPA ratings (scale 0-4)**

Health = 1
Fire = 3
Reactivity = 0

4 First aid measures

· **General information** Immediately remove any clothing soiled by the product.
· **After inhalation**
Take affected persons into fresh air and keep quiet.

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Seek medical treatment in case of complaints.
· **After skin contact**
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
· **After eye contact** Rinse opened eye for several minutes under running water. Then consult a doctor.
· **After swallowing** Seek immediate medical advice.
· **Information for doctor** No particular measures are known - treat according to symptoms.
· **The following symptoms may occur:** Headache

5 Fire fighting measures

· **Suitable extinguishing agents** CO2, sand, extinguishing powder. Do not use water.
· **For safety reasons unsuitable extinguishing agents** Water.
· **Special hazards caused by the material, its products of combustion or resulting gases:**
Formation of toxic gases is possible during heating or in case of fire.
· **Protective equipment:** Do not inhale explosion gases or combustion gases.

6 Accidental release measures

· **Person-related safety precautions:** Ensure adequate ventilation
· **Measures for environmental protection:** Prevent seepage into sewage system, workpits and cellars.
· **Measures for cleaning/collecting:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents
Collect in a suitable container and dispose of as described at paragraph 13.

7 Handling and storage

· **Handling**
· **Information for safe handling:**
Keep receptacles tightly sealed.
Store in cool, dry place in tightly closed receptacles.
Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).
· **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Fumes can combine with air to form an explosive mixture.
Flammable gas-air mixtures may be formed in empty receptacles.

· **Storage**
· **Requirements to be met by storerooms and receptacles:**
Store in a cool location.
Keep containers securely closed and dry, store at 5 - 25°C.
Store only in the original receptacle.
Provide floor trough without outlet.
· **Information about storage in one common storage facility:** Store away from oxidizing agents.
· **Further information about storage conditions:**
Keep receptacle tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
Store only outside or in explosion proof rooms.

8 Exposure controls and personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

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· **Components with limit values that require monitoring at the workplace:**

80-62-6 methyl methacrylate (25-50%)

PEL	410 mg/m³, 100 ppm
REL	410 mg/m³, 100 ppm
TLV	Short-term value: 410 mg/m³, 100 ppm Long-term value: 205 mg/m³, 50 ppm SEN

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Personal protective equipment**
· **General protective and hygienic measures**
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
Do not inhale gases / fumes / aerosols.
Avoid contact with the eyes and skin.
Store protective clothing separately.
Immediately remove all soiled and contaminated clothing
· **Breathing equipment:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
· **Recommended filter device for short term use:**

Filter AX

· **Protection of hands:**

Plastic gloves

Only use chemical-protective gloves with CE-labelling of category III.
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
· **Material of gloves**
Butyl rubber, BR
Nitrile rubber, NBR
Recommended thickness of the material: ≥ 0.5 mm
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
· **Penetration time of glove material**
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
· **As protection from splashes gloves made of the following materials are suitable:** PVC gloves
· **Not suitable are gloves made of the following materials:**
Leather gloves
Strong gloves
· **Eye protection:**

Tightly sealed goggles.

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· **Body protection:** Protective work clothing.

9 Physical and chemical properties:

· **General Information**	
Form:	Fluid
Color:	Blue
Odor:	Characteristic
· **Change in condition**	
Melting point/Melting range:	undetermined
Boiling point/Boiling range:	101°C (214°F)
· **Flash point:**	16°C (61°F) (DIN 53213)
· **Ignition temperature:**	245°C (473°F)
· **Auto igniting:**	Product is not selfigniting.
· **Danger of explosion:**	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· **Explosion limits:**	
Lower:	0.8 Vol %
Upper:	12.5 Vol %
· **Vapor pressure at 25°C (77°F):**	47 hPa (35 mm Hg)
· **Density at 23°C (73°F):**	0.98 g/cm3 (DIN 51757)
· **Solubility in / Miscibility with**	
Water at 20°C (68°F):	max 16 g/l
· **Viscosity:**	
dynamic at 23°C (73°F):	60-110 mPas (Brookfield)
kinematic at 23°C (73°F):	21-25 s (DIN 53211/4)

10 Stability and reactivity

· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **Materials to be avoided:**
acids
strong oxidizing agents
· **Dangerous reactions**
Violent reactions with strong alkalis and oxidizing agents
Reacts with amines
· **Dangerous products of decomposition:**
in the event of fire:
toxic gases and vapours
Flammable gases/vapors

11 Toxicological information

· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**		
80-62-6 methyl methacrylate		
Oral	LD50	> 5000 mg/kg (rat)
Dermal	LD50	> 5000 mg/kg (rab)
Inhalative	LC50/4 h	7093 mg/l (rat)

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103-11-7 2-ethylhexyl acrylate		
Oral	LD50	4435 mg/kg (rat)
Dermal	LD50	> 5000 mg/kg (rab)
Inhalative	LC50/4 h	600 mg/l (rat)
23077-12-1 2,2'-[(4-methylphenyl)imino]bisethanol		
Oral	LD50	300 mg/kg (rat)

· **Primary irritant effect:**
· **on the skin:** Irritant to skin and mucous membranes.
· **on the eye:** No irritating effect.
· **Sensitization:** Sensitization possible through skin contact.
· **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Irritant

12 Ecological information:

· **Ecotoxical effects:**
80-62-6 Methylmethacrylat
(Literatur)
LC50 Oncorhynchus mykiss >79 mg/l/96h OECD 203/ISO7346/EEC84/449/V,C1
EC50 Daphnia nagna 69 mg/l/48h OECD 202/ISO6341/EEC84/449/V,C2
EC3 Scenedesmus quadricauda 37 mg/l/8d DIN 38412 T.9
EC0 Pseudomos putida 100 mg/l
103-11-7 2-Ethylhexylacrylat
(Literatur)
LC50 Leuciscus idus 23 mg/l/48h DIN 38412 T.15
EC50 Daphnia magna 17 mg/l/48h EEC 79/831/V, C
EC3 Scenedeamus quadricauda > 1 mg/l/8d
EC3 Pseudomonas putide > 1 mg/l/15h
Not determined

· **Acquatic toxicity:**	
80-62-6 methyl methacrylate	
BSB5-Wert	0.14 g/g (-)
EC0	100 mg/l (Pseudomonas putida)
EC3	(192h) 37 mg/l (Scenedesmus quadicauda)
EC50	(96h) 170 mg/l (Selenastrum capricornutum)
	(48h) 69 mg/l (daphnia)
LC50	350 mg/l (Leuciscus idus)
LC50 (96h)	>79 mg/l (Onchorhynchus mykiss)
	232 mg/l (Lepomis macrochirus (Sonnenbarsch))
	277 mg/l (Goldfisch)
103-11-7 2-ethylhexyl acrylate	
EC0	(192h) 0.06 mg/l (Microcystis aeroginosa)
EC50	(48h) 17.5 mg/l (daphnia)
	(0.5h) > 1000 mg/l (Pseudomonas putida)
EC50 (72h)	44 mg/l (Scenedesmus subspicatus)
LC50	(48h) 23 mg/l (Leuciscus idus)

· **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.

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Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

13 Disposal considerations

· **Product:**
· **Recommendation** *Must be specially treated adhering to official regulations.*

· **Uncleaned packagings:**
· **Recommendation:** *Disposal must be made according to official regulations.*

14 Transport information

· **DOT regulations:**

· **Hazard class:**	3
· **Identification number:**	UN1866
· **Packing group:**	II
· **Proper shipping name (technical name):**	RESIN SOLUTION
· **Label**	3

· **Land transport ADR/RID (cross-border)**

· **ADR/RID class:**	3 Flammable liquids
· **Danger code (Kemler):**	33
· **UN-Number:**	1866
· **Packaging group:**	II
· **Description of goods:**	1866 RESIN SOLUTION, special provision 640D

· **Maritime transport IMDG:**

· **IMDG Class:**	3
· **UN Number:**	1866
· **Label**	3
· **Packaging group:**	II
· **EMS Number:**	F-E,S-E
· **Marine pollutant:**	No
· **Propper shipping name:**	RESIN SOLUTION

· **Air transport ICAO-TI and IATA-DGR:**

· **ICAO/IATA Class:**	3
· **UN/ID Number:**	1866
· **Label**	3
· **Packaging group:**	II

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· **Propper shipping name:** RESIN SOLUTION

15 Regulations

· **Cancerogenity categories**

· **EPA (Environmental Protection Agency)**		
80-62-6	methyl methacrylate	E;NL

· **IARC (International Agency for Research on Cancer)**		
80-62-6	methyl methacrylate	3
103-11-7	2-ethylhexyl acrylate	3
128-37-0	2,6-di-tert-butyl-p-cresol	3

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**		
80-62-6	methyl methacrylate	A4
128-37-0	2,6-di-tert-butyl-p-cresol	A4

· **MAK (German Maximum Workplace Concentration)**

None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

· **Markings according to EU guidelines:**
The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials

· **Code letter and hazard designation of product:**

Xi Irritant
F Highly flammable

· **Hazard-determining components of labelling:**
methyl methacrylate
2-ethylhexyl acrylate

· **Risk phrases:**
11 Highly flammable.
37/38 Irritating to respiratory system and skin.
43 May cause sensitization by skin contact.

· **Safety phrases:**
9 Keep container in a well-ventilated place.
16 Keep away from sources of ignition - No smoking.
23 Do not breathe gas
24 Avoid contact with skin.
33 Take precautionary measures against static discharges.
37 Wear suitable gloves.
43 In case of fire, use sand, carbon dioxide or powdered extinguishing agent. Never use water.
60 This material and its container must be disposed of as hazardous waste.

· **National regulations**

· **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

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· **Sara**

· **Section 355 (Exremely hazardous substances):**	
None of the ingredients is listed.	
· **Section 313 (Specific toxic chemical listings):**	
80-62-6	methyl methacrylate
· **TSCA (Toxic Substances Control Act):**	
80-62-6	methyl methacrylate
103-11-7	2-ethylhexyl acrylate
2082-81-7	1,4-Butandioldimethacrylat
23077-12-1	2,2'-[(4-methylphenyl)imino]bisethanol
2440-22-4	2-(2H-Benotriazol-2-yl)-p-kresol
31570-04-4	Tris(2,4-di-tert-butylphenyl)phosphit
· **Chemicals known to cause cancer:**	
None of the ingredients is listed.	

16 Other information:

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant R-phrases**

10 Flammable.
11 Highly flammable.
22 Harmful if swallowed.
36/38 Irritating to eyes and skin.
37/38 Irritating to respiratory system and skin.
43 May cause sensitization by skin contact.
51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
65 Harmful: may cause lung damage if swallowed.
66 Repeated exposure may cause skin dryness or cracking