# 1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: A Component Product #685 MMA Liquid Resin Product Description: Super-Low Viscosity Methyl-Methacrylate Resin

Company: Epoxy Systems, Inc.

Address: 20774 W. Pennsylvania Ave.

Dunnellon, FL 34431

**Emergency Contact No.:** 1-800-633-8253 (PERS)

Date Prepared or Revised: June 2013

For most current MSDS, please visit our website at www.epoxy.com

## 2. COMPOSITION / INFORMATION ON INGREDIENTS

#### CONTAINING: HAZARDOUS AND/OR REGULATED COMPONENTS

CONTINUE OF THE PROPERTY OF RESCENTED COMMONETY			
Chemical Name	CAS	OSHA	
	Number	Hazard	
Methyl Methacrylate	80-62-6	Yes	

Composition Note: The remaining ingredients are designated as "trade secret".

## 3. HAZARDS IDENTIFICATION

## **EMERGENCY OVERVIEW**

WARNING! FLAMMABLE. MAY CAUSE EYE AND/OR SKIN IRRITATION. PROLONGED OR

REPEATED EXPOSURE MAY CAUSE SKIN SENSITIZATION.

#### POTENTIAL HEALTH EFFECTS

Acute

**Eye Contact:** Exposure during handling may cause eye irritation, swelling, tearing, redness or cornea

damage.

**Skin Contact:** Exposure during handling may cause moderate irritation. May cause skin sensitization,

evidenced by rashes and hives.

**Inhalation:** Exposure to this product in excess of the applicable TVL or PEL may cause moderate

irritation to the nose and respiratory tract. May cause Central Nervous System

depression evidenced by headache, dizziness, and nausea.

**Ingestion:** Ingestion may cause may cause irritation to the gastrointestinal tract. May cause Central

Nervous System depression or other systemic effects.

**Systemic Effects:** Lungs, eyes, and skin.

**Chronic:** None known

Medical Conditions which May be Aggravated by Inhalation or Dermal Exposure:

Persons with eye, skin or respiratory disorders or unusual (hyper) sensitivity to chemicals

may experience adverse reactions to this product.

## 4. FIRST AID MEASURES

**Eye Contact:** Immediately flush eyes with plenty of cool water for at least 15 minutes while holding

the eyes open. If redness, burning, blurred vision, or swelling persists, CONSULT A

PHYSICIAN.

Skin Contact: In case of contact, remove product and immediately wash affected area with plenty of

soap and water for at least 5 minutes. Do not apply greases or ointments. Remove contaminated clothing. Clean contaminated clothing with soap and water before re-use. If

redness, burning, or swelling persists, CONSULT A PHYSICIAN.

**Ingestion: DO NOT INDUCE VOMITING.** Never administer anything by mouth to an

unconscious person. Rinse out mouth with water, then drink sips of water to remove taste from mouth. **CONSULT A PHYSICIAN**. Do not leave victim unattended. If vomiting occurs spontaneously, lay victim on the side and keep head

lower than waist to prevent aspiration.

**Inhalation:** If respiratory irritation or distress occurs, remove victim to fresh air. If breathing is

difficult, give oxygen. If breathing stop, apply artificial respiration. CONSULT A

PHYSICIAN.

**Notes to Physician:** All treatments should be based on observed signs and symptoms of distress in the

patient. Consideration should be given to the possibility that overexposure to materials

other than this product may have occurred.

#### 5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Water fog, carbon dioxide or dry chemical, aqueous foam.

Fire and Explosion Hazards: Hazardous gases/vapors produced are methyl methacrylate, carbon monoxide, carbon

dioxide, and smoke. Toxic and flammable vapors may be produced under combustion. Sealed containers exposed to elevated temperatures may rupture explosively due to polymerization. Vapors are heavier than air and may travel to ignition sources and flash

back. Do not allow run-off from fire fighting to enter drains or water courses.

Fire Fighting Equipment and

**Procedures:** 

Wear full protective clothing and self-contained breathing apparatus for fire fighting. Isolate fuel supply from fire. Use water spray to cool fire-exposed surfaces and

containers.

# 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** Use cautious judgment when cleaning up spill. Shut off leaks, if possible without

personal risk. Wear suitable protective clothing, gloves and eye/face protection.

Evacuate personnel to safe areas.

**Environmental Precautions:** Construct a dike to prevent spreading. Keep out of sewers, storm drains, surface waters,

and soils

**Clean-up Methods:** Small spills: Soak up with absorbent material such as clay, sand or other suitable non-

reactive material. Place in leak-proof containers. Seal tightly for proper disposal. **Large spills**: Approach suspected leak areas with caution. Create a dike or trench to contain material. Soak up with absorbent material such as clay, sand or other suitable non-reactive material. Place in leak-proof containers. Seal tightly for proper disposal. Notify authorities if any exposures to the general public or environment occur or are

**Additional Information:** Notify authorities if any exposures to the general public or environment occur or are

likely to occur. Dispose in accordance with federal, state, and local regulations.

#### 7. HANDLING AND STORAGE

**Handling (Personnel):** To prevent skin and eyes contact under the foreseeable conditions of use, wear

appropriate protective clothing and safety eyewear. When handling do not eat, drink, or smoke. Wash thoroughly after handling. Avoid breathing fumes. Handle in a well-

ventilated work area.

**Handling (Physical Aspects):** Close container after each use. Ground container to prevent explosion from static spark.

Keep away from heat, sparks and flames.

Storage: Keep away from: acids, oxidizing agents, heat, or flames. Store in a cool, dry, well-

ventilated area in closed containers. Protect containers from physical damage.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits:

Chemical Name
ACGIH
OSHA
(TLV)
(PEL)

Methyl Methacrylate
50 ppm
100 ppm

**Engineering Controls:** Where engineering controls are indicated by use conditions or a potential for excessive

exposure exists, the following traditional exposure techniques may be used to

effectively minimize employee exposures.

**Eye Protection:** When engaged in activities where product could contact the eye, wear safety glasses

with side shields, chemical splash goggles, or face shield.

**Skin Protection:** Skin contact should be minimized through use of Nitrile, neoprene or butyl gloves and

suitable long sleeved clothing. Consideration must be given both to durability as well as

permeation resistance.

**Respirator Protection:** NIOSH or MSHA approved air-purifying respirators should be used in the context of

respiratory protection program meeting the requirements of the OSHA respiratory

protection standard [29 CFR 1910.134] to control exposures when ventilation or other controls are inadequate or discomfort or irritation is experienced. Respirator and/or filter cartridge selection should be based on American National Standards Institute

(ANSI) Standards Z88.2 Practices for Respiratory Protection.

**Ventilation:** Use local exhaust or general dilution ventilation to control exposure within applicable

limits.

Work Practice Controls: Personal hygiene is an important work practice exposure control measure and the

following general measures should be taken when working with or handling this

material:

(1) Do not store, use, and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored.

(2) Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet. Wash exposed skin promptly to remove accidental splashes or contact with this material.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Form: Liquid Freezing Point: N/E

Color: Amber Flash Point:  $52^{\circ}F (11.5^{\circ}C)$ 

Odor:Strong acrid odorSpecific Gravity:0.95Vapor Pressure:N/EpH:N/EBoiling Point:N/ESolubility In Water:N/E

## 10. STABILITY AND REACTIVITY

Stability:Stable under normal conditions. Unstable with heat.Conditions To Avoid:Incompatible chemicals, heat and open flame.

Materials To Avoid: Oxidizing and reducing agents.

Hazardous Decomposition Decomposes with heat. Combustion may produce carbon monoxide, carbon dioxide,

**Products:** aldehydes and smoke.

Hazardous Polymerization: Polymerization can occur when exposed to excessive heat.

## 11. TOXICOLOGICAL INFORMATION

**Acute Toxicity:** 

 $\begin{array}{lll} \textbf{Oral (LD}_{50}, \textbf{Rat):} & \text{N/E} \\ \textbf{Dermal (LD}_{50}, \textbf{Rabbit):} & \text{N/E} \\ \textbf{Inhalation (LC}_{50}, \textbf{Rat):} & \text{N/E} \\ \end{array}$ 

**Chronic Health Hazard:** Prolonged and/or repeated exposure to high levels of methyl methacrylate may lead to

kidney, lung, liver, and heart damage. Repeated or prolonged exposure may cause

allergic reaction and/or limited sensitization.

# 12. ECOLOGICAL INFORMATION

**Ecotoxicity:** This product has not been evaluated.

Chemical Fate Information: No data found for product

# 13. DISPOSAL CONSIDERATIONS

Waste Disposal: This material is a hazardous waste by RCRA criteria (40CFR 261). Dispose of container

and unused contents in accordance to local, state and federal regulations.

Container Disposal Method: Emptied container may contain product residue and should not be reused.

## 14. TRANSPORTATION INFORMATION

DOT: UN1866, Resin Solution, 3, II IATA: UN1866, Resin Solution, 3, II

IMDG: UN1866, Resin Solution, 3, II, (11.5°C c.c)

## 15. REGULATORY INFORMATION

#### US FEDERAL REGULATIONS:

## OSHA Hazard Communication Standard (29CFR 1910.1200):

This product is considered a "hazardous chemical" under this regulation.

## Status Under Toxic Substances Control Act (TSCA) (40 CFR 710):

All chemical(s) comprising this product are either exempt or listed on the TSCA Inventory.

# **EPA Reportable Quantities:**

Clean Water Act (40CFR Section 112): Not listed.

# CERCLA Hazardous Substance (40CFR Part 302, Table 302.4):

Methyl Methacrylate CAS # 80-62-6. RQ: 1000 lbs.

EPCRA Extreme Hazardous Substance (40CFR Section 302 Part 355): Not listed.

Toxic Chemical Release Inventory (TRI) Reporting - (SARA Title III Section 313 (40 CFR 372)

Component(s) above 'de minimus' level): Methyl Methacrylate. CAS # 80-62-6.

# SARA Title III Hazard Classes (40CFR 370 Sections 311 and 312):

Fire Hazard: Yes
Reactive Hazard: Yes
Release of Pressure: No
Acute Health Hazard: Yes
Chronic Health Hazard: Yes

# **US STATE REGULATIONS:**

# California - "Safe Drinking Water and Toxic Enforcement Act" (Proposition 65):

This product may contains trace amounts of chemicals that are known to the State of California to cause cancer and/or reproductive toxicity and other harm.

# INTERNATIONAL REGULATIONS:

## CANADIAN DSL/NDSL INVENTORY STATUS:

Components of this product are listed on the Canadian DSL or NDSL inventories.

# **CANADIAN WHMIS CLASSIFICATION and SYMBOLS:**

Class **B-4**: Flammable Class **D-2B**: Material causing other toxic effects





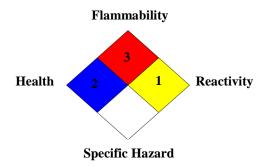
# 16. OTHER INFORMATION

# **HAZARD RATINGS:**

**Hazardous Material Information System (HMIS)** 

Health	2
Flammability	3
Physical Hazard	1
Personal Protection	В

## **National Fire Protection Association (NFPA)**



HMIS/NFPA Definitions: 0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme

Protective Equipment: Safety glasses, gloves

This Material Safety Data Sheet (MSDS) is prepared by Epoxy Systems, Inc. in compliance with the requirements of OSHA 29 CFR Part 1910.1200. The information it contains is offered in good faith as accurate as of the date of this MSDS. This MSDS is provided solely for the purpose of conveying health, safety, and environmental information. No warranty, expressed or implied, is given. Health and Safety precautions may not be adequate for all individuals and/or situations. It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations.

# 1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: B Component Product #685 MMA Initiator
Product Description: Super-Low Viscosity Methyl-Methacrylate Resin

Company: Epoxy Systems, Inc.

Address: 20774 W. Pennsylvania Ave.

Dunnellon, FL 34431

**Emergency Contact No.:** 1-800-633-8253 (PERS)

Date Prepared or Revised: June 2013

For most current MSDS, please visit our website at www.epoxy.com

## 2. COMPOSITION / INFORMATION ON INGREDIENTS

#### CONTAINING: HAZARDOUS AND/OR REGULATED COMPONENTS

Chemical Name	CAS Number	OSHA Hazard
Dibenzoyl peroxide	94-36-0	Yes
Alkyl Benzoate	131298-44-7	Yes

Composition Note: The remaining ingredients are designated as "trade secret".

## 3. HAZARDS IDENTIFICATION

### **EMERGENCY OVERVIEW**

WARNING! ORGANIC PEROXIDE. MAY CAUSE EYE AND/OR SKIN IRRITATION. PROLONGED OR

REPEATED EXPOSURE MAY CAUSE SKIN SENSITIZATION.

Peroxides and peroxide decomposition products are flammable and can ignite with explosive force if confined.

## POTENTIAL HEALTH EFFECTS

Acute

**Eye Contact:** Exposure during handling may cause eye irritation, swelling, tearing, redness or cornea

lamage.

**Skin Contact:** Exposure during handling may cause moderate irritation. May cause skin sensitization,

evidenced by rashes and hives.

**Inhalation:** Exposure to this product in excess of the applicable TVL or PEL may cause moderate

irritation to the nose and respiratory tract. May cause Central Nervous System

depression evidenced by headache, dizziness, and nausea.

**Ingestion:** Ingestion may cause may cause irritation to the gastrointestinal tract. May cause Central

Nervous System depression or other systemic effects.

**Systemic Effects:** Lungs, eyes, and skin.

**Chronic:** None known

Medical Conditions which May be Aggravated by Inhalation or Dermal Exposure:

Persons with eye, skin or respiratory disorders or unusual (hyper) sensitivity to chemicals

may experience adverse reactions to this product.

### 4. FIRST AID MEASURES

**Eye Contact:** Immediately flush eyes with plenty of cool water for at least 15 minutes while holding

the eyes open. If redness, burning, blurred vision, or swelling persists, CONSULT A

PHYSICIAN.

**Skin Contact:** In case of contact, remove product and immediately wash affected area with plenty of

soap and water for at least 5 minutes. Do not apply greases or ointments. Remove contaminated clothing. Clean contaminated clothing with soap and water before re-use. If

redness, burning, or swelling persists, CONSULT A PHYSICIAN.

**Ingestion: DO NOT INDUCE VOMITING.** Never administer anything by mouth to an

unconscious person. Rinse out mouth with water, then drink sips of water to remove taste from mouth. **CONSULT A PHYSICIAN**. Do not leave victim

unattended. If vomiting occurs spontaneously, lay victim on side and keep head lower

than waist to prevent aspiration.

**Inhalation:** If respiratory irritation or distress occurs, remove victim to fresh air. If breathing is

difficult, give oxygen. If breathing stop, apply artificial respiration. CONSULT A

PHYSICIAN.

**Notes to Physician:** All treatments should be based on observed signs and symptoms of distress in the

patient. Consideration should be given to the possibility that overexposure to materials

other than this product may have occurred.

## 5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Water fog, carbon dioxide or dry chemical, aqueous foam.

Fire And Explosion Hazard: Irritating and toxic fumes may be produced at high temperature. Hazardous gases/vapors

produced are carbon monoxide, carbon dioxide, byphenyl, and smoke. Do not allow run-

off from fire fighting to enter drains or water courses.

Fire Fighting Equipment and

**Procedures:** 

Wear full protective clothing and self-contained breathing apparatus for fire fighting. Isolate fuel supply from fire. Use water spray to cool fire-exposed surfaces and

containers.

# 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** Use cautious judgment when cleaning up spill. Shut off leaks, if possible without

personal risk. Wear suitable protective clothing, gloves and eye/face protection.

Evacuate personnel to safe areas.

**Environmental Precautions:** Construct a dike to prevent spreading. Keep out of sewers, storm drains, surface waters,

and soils.

**Clean-up Methods:** Small spills: Soak up with absorbent material such as clay, sand or other suitable non-

reactive material. Place in leak-proof containers. Seal tightly for proper disposal. **Large spills**: Approach suspected leak areas with caution. Create a dike or trench to contain material. Soak up with absorbent material such as clay, sand or other suitable non-reactive material. Place in leak-proof containers. Seal tightly for proper disposal. Notify authorities if any exposure to the general public or environment occur or are

Additional Information: Notify authorities if any exposures to the general public or environment occur or are likely to occur. Dispose in accordance with federal, state, and local regulations.

## 7. HANDLING AND STORAGE

**Handling (Personnel):** To prevent skin and eyes contact under the foreseeable conditions of use, wear

appropriate protective clothing and safety eyewear. When handling, do not eat, drink, or smoke. Wash thoroughly after handling. Avoid breathing fumes. Handle in a well-

ventilated work area.

**Handling (Physical Aspects):** 

Storage:

Close container after each use. Keep away from heat, sparks and flames.

Keep away from acids, heavy metals, alkalies, and reducing agents. Store in a cool, dry, well-ventilated area in closed containers away from source of heat and direct sunlight.

Protect containers from physical damage.

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits:Chemical NameACGIH<br/>(TLV)OSHA<br/>(PEL)Dibenzoyl peroxide $5 \text{ mg/m}^3$  $5 \text{ mg/m}^3$ 

**Engineering Controls:** Where engineering controls are indicated by use conditions or a potential for excessive

exposure exists, the following traditional exposure techniques may be used to

effectively minimize employee exposures.

**Eye Protection:** When engaged in activities where product could contact the eye, wear safety glasses

with side shields, chemical splash goggles, or face shield.

**Skin Protection:** Skin contact should be minimized through use of Nitrile, neoprene or butyl gloves and

suitable long sleeved clothing. Consideration must be given both to durability as well as

permeation resistance.

**Respirator Protection:** Respirator and/or filter cartridge selection should be based on American National

Standards Institute (ANSI) Standards Z88.2 Practices for Respiratory Protection. Ventilation:

Use local exhaust or general dilution ventilation to control exposure within applicable

**Work Practice Controls:** Personal hygiene is an important work practice exposure control measure and the

following general measures should be taken when working with or handling this

material:

(1) Do not store, use, and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored.

Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet. Wash exposed skin promptly to remove accidental splashes or contact with this material.

#### 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical Form:** Liquid Flash Point: N/E

Color: White  $>50^{\circ}$ C (122°F) SADT: Odor: No significant odor **Specific Gravity:** 1.2 @ 25°C pH: **Boiling Point:** N/E 5.8

**Freezing Point:** N/E **Solubility In Water:** Negligible

Vapor Pressure: N/E

#### 10. STABILITY AND REACTIVITY

**Stability:** Stable unless exposed to heat, flames, drying conditions and contamination from

incompatible materials.

**Conditions To Avoid:** Contamination. Water loss (drying). Direct sunlight. Open flame. Prolonged storage

above 100°F (38°C). Storage above SADT. Storage near flammable or combustible

materials.

**Materials To Avoid:** Avoid contact with rust, iron, and copper. Hazardous decomposition will occur when

contact with acids, alkalies, heavy metal, reducing agents, and peroxide accelerators.

**Hazardous Decomposition** 

Decomposes with heat. Combustion may produce Benzoic Acid, Benzene, Biphenyl,

**Products:** Phenyl Benzoate. **Hazardous Polymerization:** Will not occur..

## 11. TOXICOLOGICAL INFORMATION

**Benzoyl Peroxide** 

**Hazard Data:** 

Intraperitoneal: Mouse--LD50: 250 mg/kg.

Oral: Rat--LD50: 7710 mg/kg; Mouse-- LD50: 5700 mg/kg.

Skin: Mammal (unspecified)--LD50: >1 g/kg.

**Alkyl Benzoate** 

**Hazard Data:** 

Oral: Rat--LD50: >5000 mg/kg.

# 12. ECOLOGICAL INFORMATION

**Ecotoxicity:** This product has not been evaluated.

Chemical Fate Information: No data found for product.

### 13. DISPOSAL CONSIDERATIONS

Waste Disposal: This material is a hazardous waste by RCRA criteria (40CFR 261). Dispose of container

and unused contents in accordance to local, state and federal regulations.

**Container Disposal Method:** Emptied container may contain product residue and should not be reused.

# 14. TRANSPORTATION INFORMATION

**DOT:** UN3109, Organic Peroxide Type F – Liquid (Dibenzoyl Peroxide, 40%), 5.2, II. **IATA:** UN3109, Organic Peroxide Type F – Liquid (Dibenzoyl Peroxide, 40%), 5.2, II. **IMDG:** UN3109, Organic Peroxide Type F – Liquid (Dibenzoyl Peroxide, 40%), 5.2, II.

#### 15. REGULATORY INFORMATION

## US FEDERAL REGULATIONS:

# OSHA Hazard Communication Standard (29CFR 1910.1200):

This product is considered a "hazardous chemical" under this regulation.

## Status Under Toxic Substances Control Act (TSCA) (40 CFR 710):

All chemical(s) comprising this product are either exempt or listed on the TSCA Inventory.

# **EPA Reportable Quantities:**

Clean Water Act (40CFR Section 112): Not listed.

CERCLA Hazardous Substance (40CFR Part 302, Table 302.4): Not listed. EPCRA Extreme Hazardous Substance (40CFR Section 302 Part 355): Not listed.

## Toxic Chemical Release Inventory (TRI) Reporting - (SARA Title III Section 313 (40 CFR 372)

Component(s) above 'de minimus' level): Dibenzoyl peroxide CAS #94-36-0

# SARA Title III Hazard Classes (40CFR 370 Sections 311 and 312):

Fire Hazard: Yes
Reactive Hazard: Yes
Release of Pressure: No
Acute Health Hazard: Yes
Chronic Health Hazard: Yes

# **US STATE REGULATIONS:**

# California - "Safe Drinking Water and Toxic Enforcement Act" (Proposition 65):

This product may contain trace amounts of chemicals that are known to the State of California to cause cancer and/or reproductive toxicity and other harm.

#### **INTERNATIONAL REGULATIONS:**

# CANADIAN DSL/NDSL INVENTORY STATUS:

Components of this product are listed on the Canadian DSL or NDSL inventories.

#### **CANADIAN WHMIS CLASSIFICATION and SYMBOLS:**

Class C: Oxidizing material Class D-2B: Material causing other toxic effects





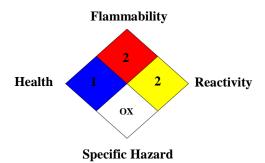
## 16. OTHER INFORMATION

#### **HAZARD RATINGS:**

**Hazardous Material Information System (HMIS)** 

Health	1
Flammability	2
Physical Hazard	2
Personal Protection	В

## **National Fire Protection Association (NFPA)**



HMIS/NFPA Definitions: 0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme

Protective Equipment: Safety glasses, gloves

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