# G.J. CHEMICAL COMPANY, INC. SAFETY DATA SHEET

## 1. PRODUCT IDENTIFIER

**1.1 PRODUCT NAME ----------> Methyl Acrylate, Inhibited**
**PRODUCT NUMBERS----------->194500-503, 194600, 194700, 194709, 194780, 194800, 194850 194900, 195100, 195300,195500**

**CHEMICAL NAME OR SYNONYMS --->Acrylic Acid, Methyl Ester**
**2-Propenoic acid, methyl ester**
**Methyl-2-propenoate**

**CAS-NO: 96-33-3** **CHEMICAL FAMILY: Ester**

**1.2 RELAVENT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST:**
**Identified uses**
**Industrial uses: Manufacture of substance, Use in Polymer production, Manufacture of intermediates, Polymerization at production sites, Laboratory reagent, Polymerization at downstream user sites.**

**USES ADVISED AGAINST: Use of the substance in any form other than as a reacted monomer within an imported polymer.**

**1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET**
**Company: G.J. CHEMICAL CO., INC.**
**Address: 40 VERONICA AVENUE**
**SOMERSET, NJ 08873**
**Telephone: 1-973-589-1450**
**Fax: 1-973-589-3072**

**1.4 Emergency Telephone Number**
**Emergency Phone: 1-800-424-9300 (CHEMTREC)**

## 2. HAZARDS IDENTIFICATION

**2.1 Classification of the substance or mixture**

**GHS Classification in accordance with 29CFR 1910 (OSHA HCS)**
**Flammable liquids (Category 2), H225**
**Acute toxicity, Oral (Category 3), H301**

**Acute toxicity, Inhalation (Category 4). H332**
**Acute toxicity, Dermal (Category 4). H312**
**Skin irritation (Category 2), H315**
**Eye irritation (Category 2A), H319**
**Skin sensitization (Category 1), H317**
**Specific target organ toxicity - single exposure (Category 3) Respiratory System, H335**
**Acute aquatic toxicity (Category 2), H401**
**Chronic aquatic toxicity (Category 3), H412**

**2.2 GHS Label elements, including precautionary statements**

**Pictogram**

**GHS02 GHS06 GHS07**

**Signal word Danger**
**Hazard statement(s)**

**H225 Highly flammable liquid and vapor.**
**H301 Toxic if swallowed.**
**H312 + H332 Harmful in contact with skin or if inhaled**
**H315 Causes skin irritation.**
**H317 May cause an allergic skin reaction.**
**H319 Causes serious eye irritation.**
**H335 May cause respiratory irritation.**
**H401 Toxic to aquatic life.**
**H412 Harmful to aquatic life with long lasting effects.**

**Precautionary statement(s)**
**Prevention:**
**P210 Keep away from heat/sparks/open flames/hot surfaces. - 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 dust/ fume/ gas/ mist/ vapors/ spray.**
**P264 Wash skin thoroughly after handling.**
**P270 Do not eat, drink or smoke when using this product.**
**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.**

**Response:**
**P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.**
**P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.**
**P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.**
**P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.**
**P311 Call a POISON CENTER or doctor/ physician.**
**P322 Specific measures (see supplemental first aid instructions on this label).**
**P330 Rinse mouth.**
**P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.**
**P337 + P313 If eye irritation persists: Get medical advice/ attention.**
**P362 Take off contaminated clothing and wash before reuse.**
**P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.**
**Storage:**
**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.**
**Disposal:**
**P501 Dispose of contents/ container to an approved waste disposal plant.**

**2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none**

## 3 INGREDIENTS

**3.1 SUBSTANCE:**

| Ingredient | CAS No. | % by wt. Range | CLASSIFICATION |
|---|---|---|---|
| Methyl Acrylate | 96-33-3 | >99.5 | Flammable liquids (Category 3), H225 |
| | EC-No.202-500-6 | | Acute toxicity, Oral (Category 4), H301 |
| | Index-No.607-034-00-0 | | Acute toxicity, Inhalation (Category 4), H332 |
| | Reg.-No. 01-2119459302- 44-XXXX | | Acute toxicity, Dermal (Category 4), H312 |
| | | | Skin irritation (Category 2). H315 |
| | | | Eye irritation (Category 2A), H319 |
| | | | Skin sensitization (Category 1), H317 |
| | | | STOT-SE (Category3) Respiratory system, H335 |
| | | | Acute aquatic toxicity (Category 2), H401 |

| | | |
|---|---|---|
| | | Chronic aquatic toxicity (Category 3), H412 |
| Monomethyl Ether of Hydroquinone (MEHQ, Mequinol) | 150-76-5<br>EC-No.205-769-8<br>Index-No.604-044-00-7<br>Reg.-No. 01-2119541813-40-XXXX | 10-225 ppm | Acute toxicity, Oral (Category 4), H301<br>Eye irritation (Category 2A), H319<br>Acute aquatic toxicity (Category 3), H401<br>Chronic aquatic toxicity (Category 3), H412 |

**3.2 MIXTURE: Not applicable.**

# 4. FIRST-AID MEASURES

**4.1 EMERGENCY AND FIRST AID PROCEDURES:**

**INHALATION: Methyl Acrylate**
****FIRST AID-* Remove from exposure to fresh air, restore breathing use oxygen if needed. Keep warm and quiet. Immediately notify a physician.**

**SKIN CONTACT (Splash): Methyl Acrylate**
****FIRST AID-* Wash affected area with soap and large amounts of water. Remove contaminated clothing. Consult a physician if irritation persists.**

**EYE CONTACT (Splash): Methyl Acrylate**
****FIRST AID-* Immediately flush eyes with water for 15 minutes. Hold eyelids open for complete irrigation. Remove contact lenses, if worn, after initial flushing. Immediately take to a physician.**

**INGESTION: Methyl Acrylate**
****FIRST AID-* Patient should be made to drink large amounts of water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Consult a physician or poison control center, treat symptomatically.**

**4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED:**
**Effects of overexposure:**
**Acute:**
**Eye> Severe burns and possible with irritation, burning, pain, watering and/or change of vision. Possible loss of vision;**
**Skin> Can cause burns which may be delayed with redness, swelling, itching, burning o blistering.**
**Inhalation> Irritation of the respiratory tract or acute nervous system depression characterized by headache, dizziness, staggering gait, confusion, unconsciousness or coma.**
**Ingestion> Can severely irritate mouth, throat, and stomach. Methyl Acrylate is very toxic by ingestion.**

**4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED:**

**Call a physician immediately, if you feel unwell.**

## 5. FIRE FIGHTING MEASURES

**Flash Point: -2.8°C (27°F) TCC** **LEL %:2.1**
**Auto-ignition Point: 415°C (779°F)** **UEL %:14.5**
**UNIFORM FIRE CODE: Flammable Liquid Class IB**

### 5.1 EXTINGUISHING MEDIA:

**Suitable extinguishing media: Foam--> x CO2--> x Dry Chemical--> x Water-fog--> x Other--> Alcohol resistant foams (ATC type) are preferred.**
**Unsuitable extinguishing media: Do not use waterjet.**

### 5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE:

**DANGEROUS FIRE HAZARD WHEN EXPOSED TO HEAT OR FLAME. VAPORS CAN TRAVEL TO A SOURCE OF IGNITION AND FLASH BACK. HEAT CAN CAUSE POLYMERIZATION. HEATED CONTAINERS CAN EXPLODE. VAPOR-AIR MIXTURES ARE EXPLOSIVE.**
**Keep containers tightly closed. Flammable liquid; isolate from all sources of ignition. Closed containers may explode when exposed to extreme heat. Rapid uncontrolled polymerization can cause explosion. Containers that rupture explosively, due to polymerization, may auto-ignite**

**CONDITIONS OF FLAMMABILITY: Flammable in the presence of a source of ignition when the temperature is above the flash point.**

**HAZARDOUS COMBUSTION PRODUCTS: Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, carbon oxides and other unidentified organic compounds evolve when this material undergoes combustion.**

### 5.3 ADVICE FOR FIREFIGHTERS:

**Shut off source. Water fog may be used to cool closed containers to prevent pressure build up and possible auto ignition or explosion when exposed to extreme heat. Fight advanced fires from a protected location. Consider the use of unmanned hose holders or monitor nozzles. Wear NIOSH approved self-contained breathing apparatus and turn out gear for confined spaces and where there is exposure to vapors. Burning liquids may be moved by flushing with water to protect personnel and minimize property**

**damage. Use full fire- fighting turn out gear including positive pressure self-contained breathing apparatus. Avoid contact with chemical during fire-fighting operations. If contact is likely change to full chemical resistant fire-fighting clothing with self-contained breathing apparatus.**

## 6. ACCIDENTAL RELEASE MEASURES

**6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES: Flammable Liquid; Eliminate ignition sources in the vicinity of the spill or released vapor. Immediately evacuate all nonessential people. Verify that responders are properly trained and wearing appropriate respiratory equipment and fire resistant protective clothing during cleanup operations.**

**6.2 ENVIRONMENTAL PRECAUTIONS:**
**Shut off valves, contain spill, keep out of water sources and sewers,**

**6.3 METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP:**
**Methods for cleanup and containment:**
**Use explosion proof equipment. For smaller spills add non-flammable absorbent such as clay or silica in spill area. If an odor or acidity problem exists, add lime or sodium bicarbonate. For large spills use foam on spill to minimize vapors clean up by vacuuming then using non-flammable absorbent.**
**Methods for disposal:**
**Remove contaminated soil to remove contaminated trace residues. Place all saturated absorbent, using non-sparking tools, in an approved container for disposal. Flush with water to remove trace reside. Minimize breathing vapors and skin contact, ventilate confined areas, open all windows and doors, assure conformity with applicable government regulations. Keep all nonessential people away. Caution: Spontaneous polymerization can occur if material is released or mixed with incompatibles.**

**6.4 REFERENCE TO OTHER SECTIONS: See Section 8 and 13.**

## 7. HANDLING AND STORAGE

**7.1 PRECAUTIONS FOR SAFE HANDLING: This material presents a fire hazard. Invisible vapor spreads easily and can be set on fire by many sources, such as pilot lights, welding equipment, and electrical motors and switches. Vapor is heavier than air and can travel considerable distance to a source of ignition and flash back. Avoid breathing vapors in top of shipping container. Use with adequate ventilation. Avoid prolonged or repeated contact with eyes, skin and clothing. Do not take internally. Maintain contact with atmosphere of 5-21% oxygen. Do not use inert atmosphere as blanket. Avoid work practices that may release volatile components in the atmosphere. Avoid contaminating soil or**

**releasing material into sewage and drainage systems. Use non-sparking tools to open or close container. Avoid static electricity discharges.**
**Advice on general occupational hygiene:**
**Wash hands before breaks and after work. Keep away from food, drink and animal feeding stuffs. When using do not smoke. Wash contaminated clothing before reuse.**

**STATIC HAZARD: Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not be sufficient. For more information refer to OSHA Standard 29CFR 1910.106 "Flammable and Combustible Liquids" and National Fire Protection Association (NFPA 77) "Recommended Practice on Static Electricity".**

**7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES:**
**Store in closed containers away from direct sunlight. Store large quantities in buildings designed to comply with OSHA 1910.106. Store at 15° to 25° C (59°-77°F)**
**Avoid storage under an oxygen free atmosphere. An air space is required above the liquid in all containers. Maintain contact with atmosphere of 5-21% oxygen. Do not use inert atmosphere as blanket. Store only in stabilized state.**
**Under proper storage conditions a storage stability of 1 year is expected at ambient temperature. Do not store with less than 10 % headspace above liquid**

**Keep containers tight and upright to prevent leakage. Keep containers closed when not in use. Proper grounding procedures should be used to avoid static electricity. Avoid direct sunlight. Do not store with incompatible materials e.g. inert gas, strong bases and strong acids.**

**CONTAINER WARNINGS: Containers should be Bonded and Grounded when pouring. Avoid free fall of liquid in excess of a few inches. Empty containers release residue and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, or expose such containers to heat, sparks, static electricity or other sources of ignition. Do not attempt to clean. "Empty" drums should be completely drained, properly bunged and promptly returned to a drum re-conditioner.**

**7.3 SPECIFIC END USES: Apart from the uses mentioned in section 1.2 no other specific uses are stipulated**

## 8. EXPOSURE CONTROL (PERSONAL PROTECTION)

**8.1 CONTROL PARAMETERS**

| Ingredient | CAS No. | % by WT. | Exposure |
|---|---|---|---|

| | | Range | Limits |
|---|---|---|---|
| Methyl Acrylate | 96-33-3<br>EC-No.202-500-6<br>Index-No.607-034-00-0<br>Reg.-No. 01-2119459302- 44-XXXX | 99.5min. | 2ppm TWA (ACGIH)<br>10ppm TWA (OSHA)<br>10ppm TWA (NIOSH)<br>250ppm (IDLH) |
| Monomethyl Ether of Hydroquinone (MEHQ) (Mequinol) | 150-76-5<br>EC-No.205-769-8<br>Index-No.604-044-00-7<br>Reg.-No. 01-2119541813-40-XXXX | 10-225ppm | 5mg/m3TWA (ACGIH)<br>5mg/m3TWA (NIOSH) |

**Key:** (PEL) = Permissible Exposure Limit OSHA
(TLV) = Threshold Limit Value OSHA & ACGIH
(STEL) = Short Term Exposure Limit ACGIH
(WEEL) = USA. Workplace Environmental Exposure Levels
(TWA) = Time Weighted Average
CAS = Chemical Abstracts Registry Number
IDLH = Immediate Danger to Life and Health
N.E. =None Established

## 8.2 EXPOSURE CONTROLS

**EXPOSURE GUIDELINES > Consider the potential hazards of this material (Section 3), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended.**

**ENGINEERING CONTROLS > Provide general dilution or local exhaust ventilation in volume and pattern to keep concentrations within permitted exposure limits. All areas should be ventilated in accordance with OSHA Regulation 29 CFR Part 1910. Explosion proof motors should be used in mechanical ventilation.**

**RESPIRATORY PROTECTION > For vapor concentrations 1 to 10 times TWA or PEL an air purifying NIOSH/MSHA Approved respirator with full face-piece and organic vapor cartridges. For concentrations over 10 times TWA or PEL, in confined areas, and/or where vapor concentrations are unknown use a approved positive pressure full face-piece supplied air respirator.**

**EYE/FACE PROTECTION > Use safety eyewear with splash guards, goggles with face shield. Shower and eyewash should be easily accessible to the work area.**

**SKIN PROTECTION > Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product.**

**Full contact protection:**
**Material: butyl-rubber, ethyl vinyl alcohol laminate (EVAL), Neoprene, Nitrile /butadiene rubber.**
**Breakthrough time >480minutes**
**Splash contact:**
**Material: Nitrile rubber chemical resistant gloves.**
**Breakthrough time >60minutes.**
**Gloves should be removed and replaced immediately if there is any indication of degradation or breakthrough.**

**HYGIENE: Use good personal hygiene practices, wash hands before eating, drinking, smoking or using toilet facilities.**

**BODY CLOTHING> Use chemical resistant apron or other impervious clothing. Remove and wash contaminated clothing before reuse.**

## ⑨. PHYSICAL AND CHEMICAL PROPERTIES

**9.1 Information on basic physical and chemical properties**

**Methyl Acrylate 96-33-3**

**9.1.1Appearance----------> Clear mobile liquid**
**9.1.2 Color----------> Colorless**
**9.1.3Odor----------> Pungent**
**9.1.4 Odor Threshold----------> 14ppb**
**9.1.5 pH----------> No data available**
**9.1.6 Molecular Weight----------> 86.1**
**9.1.7 Melting/Freezing Point)----------> -75 °C (-103 °F)**
**9.1.8 Boiling Point ( °F)----------> 175**
**9.1.9 Flash Point----------> -3 °C (27 °F) CC**
**9.1.10 Evaporation Rate (Butyl Acetate=1)--> <3.5**
**9.1.10.2 Upper Flammability Limit----------> 14.5% (V)**
**9.1.10.1 Lower Flammability Limit----------> 2.1% (V)**
**9.1.11 Vapor Pressure----------> 68mmHg20°C**
**9.1.12 Vapor Density (air=1)----------> 2.97**
**9.1.13 Specific Gravity----------> .9567@25°C**
**9.1.14.1 Water Solubility----------> 6%**
**9.1.15 Partition Coefficient n-Octanol/Water> log Pow: 0.74**
**9.1.16 Auto-Ignition Temperature----------> 779°F**
**9.1.17 Decomposition Temperature----------> No data available**
**9.1.18 Viscosity----------> No data available**
**9.1.19 Explosive Properties----------> No data available**
**9.1.20 Oxidizing Properties----------> No data available**

**9.2 Other information SAPT +50 °C < at the inhibitor level 10-20 ppm.**

## 10. STABILITY AND REACTIVITY INFORMATION

**10.1 REACTIVITY: No applicable information available**

**10.2 CHEMICAL STABILITY: Unstable ( ) Stable (X)**
**This material is considered stable under specified conditions of storage, shipment and use. Must be equilibrated with an atmosphere containing 5-8% (by volume) oxygen for inhibitor to function. See storage, Section 7. Unstable at elevated temperatures.**

**10.3 POSSIBILITY OF HAZARDOUS REACTIONS:**
**Explosion and fire hazard exists under confined conditions. Ignitable air mixtures can form when the product is heated above the flash point and/or when sprayed or atomized. Formation of explosive gas/air mixtures. Risk of spontaneous and violent self-polymerization if inhibitor is lost or product is exposed to excessive heat. Risk of spontaneous polymerization when heated or in the presence of UV radiation. With un-stabilized product, spontaneous polymerization may occur e.g. through ambient heat. Polymerization coupled with heat formation. Polymerization produces gases which may burst closed or confined containers. Reactions may cause ignition. Risk of spontaneous polymerization by oxygen depletion of the liquid phase. Radical formation can cause exothermic polymerization. Reacts with peroxides and other radical components. Risk of spontaneous polymerization in the presence of starters for radical chain reactions (e.g. peroxides). Reacts with nitric acid. Polymerizes explosively in contact with strong oxidizing agents. Risk of spontaneous polymerization in the presence of oxidizing agents. Hazardous reactions in presence of mentioned substances to avoid. The product is stabilized against spontaneous polymerization prior to dispatch. The product is stable if stored and handled as prescribed/indicated.**

**HAZARDOUS POLYMERIZATION: May occur (X) Will not occur.**
**Uncontrolled polymerization can cause rapid evolution of heat and increased pressure which can result in violent rupture of storage vessels or containers.**

**10.4 CONDITIONS TO AVOID: --> Heat, Sparks, Pilot Lights, Static Electricity, and Open Flame. Extremes of temperature and direct sunlight. Avoid static discharge.**

**10.5 INCOMPATIBLE MATERIALS --> Avoid contact with the following: polyvinylchloride, radical formers, free radical initiators, peroxides, mercaptans, nitro-compounds, perborates, azides, ether, ketones, aldehydes, amines, nitrates, nitrites, oxidizing agents, reducing agents,**

**strong bases, acid anhydrides, acid chlorides, concentrated mineral acids, metal salts Inert gas**

**10.6 HAZARDOUS DECOMPOSITION PRODUCTS --> Under normal conditions of storage and use, hazardous decomposition products should not be produced. Fumes, Carbon Monoxide, Carbon dioxide.**

## 11. TOXICOLOGICAL INFORMATION

**11.1 INFORMATION ON TOXICOLOGICAL EFFECTS:**

**Routes of Entry: Inhalation--> x Skin--> x Ingestion--> x Eye--> x**

**ACUTE HEALTH EFFECTS:**

**Effects of overexposure:**

**Eye> Severe burns and possible with irritation, burning, pain, watering and/or change of vision. Possible loss of vision;**

**Skin> Can cause burns which may be delayed with redness, swelling, itching, burning o blistering;**

**Inhalation> Irritation of the respiratory tract or acute nervous system depression characterized by headache, dizziness, staggering gait, confusion, unconsciousness or coma.**

**Ingestion> Can severely irritate mouth, throat, and stomach. Methyl Acrylate is very toxic by ingestion.**

**Chronic: Single oral doses of 280mg/kg methyl acrylate in rabbits resulted in death characterized by difficult breathing, bluish color to the skin and mucous membranes, convulsions, and hypothermia. Chronic exposure to methyl acrylate has injured lungs, liver and kidneys in experimental animals. In 24 month inhalation study, rats exposed to 15, 45, and 135ppm exhibited changes of the olfactory epithelium of the nasal mucosa and of the cornea were noted.**

**Medical Conditions Aggravated by Exposure> Skin contact may aggravate an existing dermatitis. Chronic disease of eyes or respiratory tract.**

**ACUTE TOXICITY:**

**The effects of overexposure shown in Section II are based on acute toxicity profiles. Typical values are:**

| Ingredient | Oral LD50 (Rat) | Skin LD50 (Rabbit) | Inhalation LC50 |
|---|---|---|---|
| | | | |
| | | | |

| | | | | |
|---|---|---|---|---|
| **Methyl Acrylate** | **227-300mg/kg** | **1200mg/kg** | **1000ppm/4hrs** | |
| **Monomethyl Ether of Hydroquinone** | **N.D.** | **2000mg/kg** | | |

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**Skin corrosion/irritation: Causes skin irritation. pH=7**

**Serious eye damage/eye irritation: Causes serious eye irritation. pH=7**

**Respiratory or Skin sensitization:**

**Respiratory: No data available.**
**Skin: Causes sensitization.**

**MUTAGENIC EFFECTS: Mixed results in vitro and in vivo.**

**CARCINOGEN STATUS:**
**IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Methyl acrylate)**
**NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.**
**OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.**

**REPRODUCTIVE TOXICITY: This product did not cause developmental toxicity in rats after inhalation exposure at 25, 50 or 100ppm for 6 hours per day, during days 6 to 20 of gestation.**

**Specific target organ toxicity (STOT-SE) - single exposure (Globally Harmonized System)**
**Inhalation - May cause respiratory irritation. Target organs: Respiratory tract.**

**Specific target organ toxicity (STOT-RE) - repeated exposure (Globally Harmonized System)**
**no data available**

**ASPIRATION HAZARD:**
**No data available**

**11.2 ADDITIONAL INFORMATION: Harmful if swallowed. Harmful in contact with skin. Development of pulmonary edema.**

**RTECS: AT2800000**

## 12. ECOLOGICAL INFORMATION

**ECOLOGY - Water**

**DANGEROUS TO AQUATIC LIFE IN HIGH CONCENTRATIONS**
**May be dangerous if it enters water intakes.**
**Notify local health and pollution control officials.**
**Notify operators of nearby water intakes.**

**12.1 AQUATIC TOXICITY**

**Toxicity to Fish: Methyl Acrylate exhibits moderate acute toxicity to fish.**

| | | |
|---|---|---|
| **LC50 Oncorhynchus mykiss (Rainbow Trout) -** | **3.4ppm -** | **96 h** |
| **LC50 Cyprinodon variegatus variegatus (Sheepshead Minnow)** | **1.1ppm -** | **96 h** |
| **LC50 Carassius auratus (Goldfish) -** | **5ppm -** | **96 h** |

**Toxicity to invertebrates:**

| | | |
|---|---|---|
| **EC50 Daphnia Magna (Water Flea) -** | **2.6ppm -** | **48 h** |

**Toxicity to Algae:**

| | | |
|---|---|---|
| **LC50 Pseudokirchnerella subcapitata (Algae) -** | **7ppm -** | **96 h** |

**12.2 PERSISTANCE AND DEGRADABILITY:**
**Biodegradation: 90 - 100 % Exposure time: 28 d Method: OECD Test Guideline 310 or Equivalent**
**Methyl Acrylate was confirmed to be significantly degradable in the Japanese MITI biodegradability screening test.**
**Atmospheric photochemical degradation (half-life) is estimated to be 14.5 hours.**
**Volatization half-lives of 6.8hours and 3.2 days for river and pond, respectively.**

**12.3 BIOACCUMULATIVE POTENTIAL: The n-octanol/water partition coefficient for methyl acrylate Log Pow is 0.739.**
**Bioconcentration Factor (BDF): 316 calculated**
**This suggests a low potential to bio-accumulate.**

**12.4 MOBILITY IN SOIL: The substance will slowly evaporate into the atmosphere from the water surface. Adsorption to solid soil phase is not expected.**

**12.5. RESULTS OF PBT AND vPvB ASSESSMENT: This substance/mixture contains no components considered to be either persistent, bio-accumulative and toxic (PBT), or very persistent and very bio-accumulative (vPvB) at levels of 0.1% or higher.**

**12.6. OTHER ADVERSE EFFECTS: Avoid release to the environment.**

## 13. DISPOSAL CONSIDERATIONS

**13.1 WASTE TREATMENT METHODS > Hazard characteristic and regulatory waste stream classification can change with product use. Accordingly it is the responsibility of the user to determine the proper storage, transportation, treatment and or disposal methodologies for spent materials and residues at time**

**of disposition. Dispose in accordance with all applicable disposal regulations. Incinerate under controlled conditions in a permitted facility.**

**CONTAMINATED PACKAGING: Dispose of as unused product**

**RCRA: The unused product is a RCRA hazardous waste if discarded. The RCRA ID number is: D001.**
**DISPOSAL MUST BE IN ACCORDANCE WITH STANDARDS APPLICABLE TO GENERATORS OF HAZARDOUS WASTE, 48 CFR 262**

## 14. TRANSPORT INFORMATION

**Land Transport (DOT)**
**14.1 USDOT ID Number----------> UN1919**
**14.2 USDOT Shipping Name----------> Methyl Acrylate, Inhibited**
**14.3 USDOT Hazard Classification-------> 3 (Flammable Liquid)**
**USDOT Label Codes----------> 3 (Flammable Liquid)**
**14.4 USDOT Package Code----------> II**
**14.5 Marine Pollutant----------> No**
**14.6 Special precautions for user--------> None**
**Emergency Response Guide--------> 129P**

**Sea Transport (IMDG)**
**14.1 ID Number----------> UN1919**
**14.2 Proper shipping name----------> METHYL ACRYLATE, INHIBITED**
**14.3 Hazard Classification----------> 3 (Flammable Liquid))**
**Label Codes----------> 3**
**14.4 Package Code----------> II**
**14.5 Marine Pollutant----------> No**
**14.6 Special precautions for user----------> Yes**
**EMS-Number----------> F-E, S-D**

**Air Transport (IATA)**
**14.1 ID Number----------> UN1919**
**14.2 Proper shipping name----------> Methyl Acrylate, Inhibited**
**14.3 Hazard Classification----------> 3 (Flammable Liquid)**
**Label Codes----------> 3**
**14.4 Package Code----------> II**
**14.5 Environmental hazard----------> None**
**14.6 Special precautions for user----------> None**

## 15. REGULATORY INFORMATION

**15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE:**

**SARA TITLE III (Superfund Amendment and Reauthorization Act)**
**SECTION 302 AND 304: Extremely Hazardous Substance List (40 CFR 355) - Not Listed**
**SECTION 313: Toxic Chemicals Listing (40 CFR 372.65) - Listed Methyl Acrylate CAS 96-33-3**
**SECTION 311/312: Hazard Categorization (40 CFR 370) - Acute Health Hazard, Fire Hazard, Reactive Hazard**

**CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act)**

**SECTION 102(A) Hazardous Substances (40 CFR 302.4) - Not Listed**
**Reportable Quantity - None**
**SECTION 101(14) Reportable Quantity: None**

**Massachusetts Right to Know Components**
**Methyl acrylate CAS-No.96-33-3**
**Mequinol CAS-No.150-76-5**

**Pennsylvania Right to Know Components**
**Methyl acrylate CAS-No.96-33-3**
**Mequinol CAS-No.150-76-5**

**New Jersey Right to Know Components**
**Methyl acrylate CAS-No.96-33-3**
**Mequinol CAS-No.150-76-5**

**California Prop. 65 Components**
**This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.**

**TSCA (Toxic Substance Control Act)**

**Methyl Acrylate CAS 96-33-3 and Mequinol CAS-No.150-76-5 are listed on the TSCA Inventory.**

**Methyl Acrylate FDA Indirect Food Contact Approvals:**
**21CFR175.105, 21CFR175.300, 21CFR175.360, 21CFR177.1010, 21CFR177.2420, 21CFR179.45**

**International Inventories:**

| Country or Region | Inventory Name | On inventory yes/no |
|---|---|---|
| **Australia** | Australian Inventory of Chemical Substances (AICS) | Yes |

| | | |
|---|---|---|
| **Canada** | Domestic Substances List (DSL) | Yes |
| **Canada** | Non-Domestic Substances List (NDSL) | No |
| **China** | Inventory of Existing Chemical Substances in China (IECSC) | Yes |
| **Europe** | European Inventory of Existing Commercial Chemicals Substances (EINECS) | Yes |
| **Europe** | European List of Notified Chemical Substances (ELINCS) | No |
| **Japan** | Inventory of Existing and New Chemical Substances (ENCS) | Yes |
| **Japan** | Industrial Safety & Health Law Inventory (ISHL) | Yes |
| **Korea** | Existing Chemicals List (ECL) | Yes |
| **Mexico** | National Inventory of Chemical Substances (INSQ) | Yes |
| **New Zealand** | New Zealand Inventory | Yes |
| **Philippines** | Philippine Inventory of Chemicals and Chemical Substances (PICCS) | Yes |
| **Switzerland** | Inventory of Notified New Substances (CHINV) | Yes |
| **Taiwan** | National Existing Chemical Inventory (NECI) | Yes |
| **United States & Puerto Rico** | Toxic Substances Control Act Inventory | Yes |

**15.2 CHEMICAL SAFETY ASSESSMENT: A chemical safety assessment has been carried out for this substance.**

## 16. OTHER INFORMATION:

**Hazard Rating:**

**4-Extreme**
**3-High**
**2-Moderate**
**1-Slight**
**0-Insignificant**

**NFPA RATINGS (SCALE 0-4): Health=2 Fire=3 Reactivity=2**
**HMIS RATINGS (SCALE 0-4): Health=3 Fire=3 Reactivity=2 PPE=H**

**Text of hazard statement codes in Section 2 and 3:**
**Flammable liquids (Category 2),H225**
**Acute toxicity, Oral (Category 3),H301**
**Acute toxicity, Inhalation (Category 4), H332**
**Acute toxicity, Dermal (Category 4), H312**
**Skin irritation (Category 2), H315**
**Eye irritation (Category 2A), H319**
**Skin sensitization (Category 1), H317**
**Specific target organ toxicity - single exposure (Category 3)**
**Respiratory System, H335**
**Acute aquatic toxicity (Category 2), H401**
**Chronic aquatic toxicity (Category 3), H412**

**16.1 Revisions**
**Date of preparation-> March 29, 2000**
**Revision Number----> 1.8**
**Revision Content----> Updated Sections: 1, 3, 4, 5, 8, 10, 11, 15, and 16**

**Revision Date---------> April 11, 2019**
**Prepared by----------> T.G. Fenstermaker,Jr.**

**Acronyms:**

| | | |
|---|---|---|
| ACGIH | - | American Conference of Governmental Industrial Hygenists |
| AIHA | - | American Industrial Hygiene Association |
| ANSI | - | American Nation Standards Institute |
| API | - | American Petroleum Institute |
| CERCLA | - | Comprehensive Emergency Response, Compensation, and Liability Act |
| DOT | - | U.S. Department of Transportation |
| EPA | - | U.S. Environmental Protection Agency |
| HMIS | - | Hazardous Materials Information System |
| IARC | - | International Agency For Research On Cancer |
| MSHA | - | Mine Safety and Health Administration |
| NFPA | - | National Fire Protection Association |
| NIOSH | - | National Institute of Occupational Safety and Health |
| NOIC | - | Notice of Intended Change (Proposed change to ACGIH TLV) |
| NTP | - | National Toxicology Program |
| OPA | - | Oil Pollution Act of 1990 |
| OSHA | - | U.S. Occupational Safety & Health Administration |
| PEL | - | Permissible Exposure Limit (OSHA) |
| RCRA | - | Resource Conservation and Recovery Act |
| REL | - | Recommended Exposure Limit (NIOSH) |
| SARA | - | Superfund Amendments and Reauthorization Act of 1986 Title III |
| SCBA | - | Self-Contained Breathing Apparatus |
| STEL | - | Short-Term Exposure Limit (generally 15 minutes) |
| TLV | - | Threshold Limit Value |
| TSCA | - | Toxic Substances Control Act |
| TWA | - | Time Weighted Average (8hr.) |
| WHMIS | - | Canadian Workplace Hazardous Materials Information System |