



Section 1. Product and Company Identification

**Product Name** Allyl Methacrylate  
**CAS Number** 96-05-9

**Parchem - fine & specialty chemicals**  
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**New Rochelle, NY 10801**  
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CHEMTEL  
Toll Free US & Canada: 1 (800) 255-3924  
All other Origins: 1 (813) 248-0585  
Collect Calls Accepted

Section 2. Hazards Identification

**Classification of the substance or mixture**

**GHS Classification**

**Physical Hazards**

Explosives: Not Applicable  
Flammable Gasses: Not Applicable  
Flammable Aerosols: Not Applicable  
Oxidizing Gasses: Not Applicable  
Gases under Pressure: Not Applicable  
Flammable Liquids: Category 3  
Flammable Solids: Not Applicable  
Self-Reactive Substances & Mixtures: Classification Not Possible  
Pyrophoric Liquids: Classification Not Possible  
Pyrophoric Solids: Not Applicable  
Self-Heating Substances & Mixtures: Classification Not Possible  
Substances & Mixtures which, in Contact with Water, Emit Flammable Gases: Not Applicable  
Oxidizing Liquids: Not Applicable  
Oxidizing Solids: Not Applicable  
Organic Peroxides: Not Applicable  
Corrosive to Metals: Classification Not Possible

**Health Hazards**

Acute Toxicity (Oral): Category 3  
Acute Toxicity (Dermal): Category 3  
Acute Toxicity (Inhalation: Gas): Not Applicable  
Acute Toxicity (Inhalation: Vapor): Category 2  
Acute Toxicity (Inhalation: Dust): Not Applicable  
Acute Toxicity (Inhalation: Mist): Classification Not Possible  
Skin Corrosion/Irritation: Category 2  
Serious Eye Damage/Eye Irritation: Category 2B  
Respiratory Sensitization: Category 1  
Skin Sensitization: Category 1  
Germ Cell Mutagenicity: Classification Not Possible

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Carcinogenicity: Classification Not Possible  
Reproductive Toxicity: Classification Not Possible  
STOT/Systemic Toxicity (Single Exposure): Category 3 (Respiratory tract irritation, narcotic effects)  
STOT/Systemic Toxicity (Repeated Exposure): Classification Not Possible  
Aspiration Hazard: Classification Not Possible

**Environmental Hazards**

Acute Hazards to the Aquatic Environment: Category 1  
Chronic Hazards to the Aquatic Environment: Not Classified

**GHS Label Elements**

**Pictograms:**



**Signal word:** DANGER

**Hazard and precautionary statements**

**Hazard Statements**

Flammable liquid and vapor.  
Toxic if swallowed.  
Toxic in contact with skin.  
Fatal if inhaled.  
Causes skin irritation.  
Causes eye irritation.  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
May cause an allergic skin reaction.  
May cause respiratory irritation.  
May cause drowsiness or dizziness.

**Precautionary Statements**

**Prevention**

Do not handle until the safety precautions in this MSDS have been read and understood.  
Keep away from heat/sparks/open flames. - No smoking.  
Keep container tightly closed.  
Wear appropriate protective gloves, eye protection, and face shield.  
Ground/bond container and receiving equipment if electrostatically sensitive material is to be reloaded.  
Use explosion-proof electrical, ventilating, or lighting equipment. Take precautionary measures against static discharge.  
Use only non-sparking tools.  
Do not eat, drink, or smoke when using this product.  
Wash hands thoroughly after handling.

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Do not breathe mist/vapors/spray.  
Use only outdoors or in a well-ventilated area.

**Response**

If swallowed, immediately call a POISON CENTER or doctor/physician.

If swallowed, rinse mouth.

Wash contaminated clothing before reuse.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If in eyes: If eye irritation persists, get medical advice/attention.

Wash hands after handling.

If inhaled: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

If respiratory symptoms are shown, call a POISON CENTER or doctor/physician.

Immediately take off or remove all contaminated clothing.

Contaminated work clothing should not be allowed out of the workplace.

If on skin or hair: Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

If inhaled, immediately call a POISON CENTER or doctor/physician.

If on skin: If skin irritation or a skin rash occurs, get medical advice/attention.

Call a POISON CENTER or doctor/physician if you feel unwell.

**Storage:** Keep container tightly closed. Store in a well-ventilated place. Store locked up

**Disposal:** Commission a waste disposal contractor licensed by the local government to dispose of contents or container.

Section 3. Composition / Information on Ingredients

**Common Name** Allyl Methacrylate  
**Synonym(s)** AMA  
**Formula** C<sub>7</sub>H<sub>10</sub>O<sub>2</sub>  
**CAS Number** 96-05-9

COMPONENT	CAS NUMBER	CONCENTRATION
Allyl Methacrylate	96-05-9	≥ 96.0%

Section 4. First Aid Measures

**Inhalation:** Immediately remove victim to fresh air and keep quiet and warm. Get medical advice.

**Skin Contact:** Immediately remove contaminated clothing and shoes. Rinse the affected area thoroughly with soap and plenty of water. If abnormality is exhibited, get medical advice.

**Eye Contact:** Immediately rinse the affected eye(s) with plenty of water for at least 15 minutes. Get medical advice.

**Ingestion:** Immediately have the victim rinse the mouth and drink plenty of water, but do not induce vomiting. Get medical advice without delay. If the victim is unconscious, do not induce vomiting and do not give anything into the mouth.



#### Section 5. Firefighting Measures

**Extinguishing Media:** Powder, carbon dioxide, dry sand, alcofoam

**Unsuitable Extinguishing Media:** Use of jet water may cause spreading of fire.

#### Specific Hazards

A fire may cause irritating, corrosive, and/or toxic gas.

The container may explode when heated.

Highly flammable. Combustible with heat, sparks, flames.

Dangerous to cause vapor explosion indoors, outdoors, or in a sewer.

#### Special Firefighting Measures

Remove containers from a fire area if safe to do so.

Keep cooling containers thoroughly with plenty of water after extinguishing fire.

Fight a fire at an effective and farthest place using a hose holder and a nozzle with a monitor.

In case of a major fire, fight a fire using a hose holder and a nozzle with a monitor. If this is not possible, flee from the area and let it burn.

Very low flash point. Spray water for major fire ineffective with extinguishing media other than water spray.

**Special Protective Actions for Fire-Fighting:** In fighting a fire, wear appropriate fresh-air respiratory equipment and chemical resistant clothing.

#### Section 6. Accidental Release Measures

**Personal Precautions, Protective Equipment, & Emergency Procedures:** Do not touch the leakage or walk in it. Immediately isolate the spill area wide enough in all directions. Evacuate non-essential personnel. Stay on the windward side. Ventilate confined rooms before entering. Prevent contact with the eyes and skin or inhalation by wearing personal protective equipment (Refer to Section 8: Exposure Controls/Personal Protection). In case of leakage but without a fire, wear hermetic and impervious protective clothing. Leave lower-lying areas.

**Environmental Precautions:** Avoid release to the environment.

Take care that the product will not be discharged into a river, etc. to exert a harmful influence on the environment.

**Methods and Materials for Containment and Cleaning up:** Ground all the equipment used for handling spills. Stop the leak if safe to do so. Use vapor control foam to lower the evaporation concentration.

**Prevention of Secondary Hazards:** Remove all ignition sources immediately. (Do not smoke nearby and keep away from sparks and flames.)

#### Section 7. Handling and Storage

#### Handling

**Technical Measures:** When indoors, confine sources or provide local exhaust ventilation.

**Local Exhaust Ventilation/Full Ventilation System:** Local exhaust ventilation and a full ventilation system described in '8. Exposure Controls/Personal Protection' are required.



**Precautions:**

Avoid high temperature equipment, sparks, flames, and contact with strong oxide.  
Avoid foreign substances such as acid, alkali, heavy metal, organic matter, and garbage to get mixed.

**Precautions for Safe Handling:**

Do not use high temperature equipment, sparks, and flames nearby.  
Do not fall, drop, impact, and drag the container.  
Avoid eye or skin contact.  
Do not eat, drink or smoke when using this product.  
Do not breathe mist/vapors/spray.  
Exhaust ventilation is required.  
Use only outdoors or in a well-ventilated area.  
Do not swallow.  
Wash hands after handling.  
Contaminated work clothing should not be allowed out of the workplace.

**Storage**

**Technical Measures:** Walls, pillars and a floor must be fireproof and beams also must be made of noncombustible material for a storage room.

The roof of storage facilities must be made of noncombustible material and tiled with metallic boards or light noncombustible material; however, no ceiling must be boarded.

The floor of storage facilities must be laid with impervious material and water cannot reach the surface of the floor.

The floor of the storage facilities should be made of material impervious to dangerous substances and an appropriate slant and a catch basin must be provided with.

Facilities for sunlight, lighting, and ventilation are required to store or handle dangerous goods in the storage.

**Conditions for Safe Storage:** Store the container in a cool and dark room to protect from direct sunlight.

**Safe Materials for Containers/Packaging:** Use containers provided in the Fire Service Law and United Nations Laws and Regulations for Transportation.

Section 8. Exposure Controls / Personal Protection

**Engineering Controls:** Eyewash stations and emergency showers are required in the storage or the workplace. Handle only in a sealed off system with tightly-closed equipment. Seal off facilities or adopt local exhaust ventilation or other engineering measures. A ventilation system is required if mist is produced in heat handling.

**Control Limit:** Not established

**Exposure Limit**

**Japan Society for Occupational Health (2007):** Not established

**ACGIH (2007):** Not established



### Personal Protective Equipment

**Respiratory Protection:** Respirator with organic vapor cartridge

**Hand Protection:** Rubber gloves

**Eye Protection:** Protective glasses (goggles, face shield)

**Skin and Body Protection:** Work clothing, helmet, safety boots/rubber boots, rubber apron, etc.

**Proper Hygienic Measures:** Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.

### Section 9. Physical and Chemical Properties

**Appearance:** Colorless liquid

**Odor (Odor Threshold):** Characteristic (pungent) odor

**pH:** No data available

**Melting/Freezing Point:** -60°C or below

**Boiling Point:** 144°C

**Flash Point:** 37.8°C (a tag closed cup)

**Auto-ignition Temperature:** Approximately 400°C

**Flammability or Explosive Range:** No data available

**Vapor Pressure:** No data available

**Vapor Density:** 4.3 (Air = 1)

**Specific Gravity (Relative Density):** 0.930 - 0.940 (20°C)

**Solubility:** No data available (water insoluble)

**Partition Coefficient (Octanol/Water):** No data available

**Decomposition Temperature:** No data available

### Others

**Refractive Index:** 1.4358 (25°C)

**Viscosity:** 0.72cp (25°C)

### Section 10. Stability and Reactivity

**Stability:** Stable in the designated use and storage.

**Possibility of Hazardous Reactions:** Polymerizes with sunlight, heat, catalysts.

**Conditions to Avoid:** Not reported

**Incompatible Materials:** Not reported

**Hazardous Decomposition Products:** Not reported

### Section 11. Toxicological Information

#### Acute Toxicity

**Oral Rat LD50:** Due to 70 mg/kg, Category 3 was assigned.

**Dermal Rabbit LD50:** Due to 500 µL/kg (=469 mg/kg), Category 3 was assigned.



**Inhalation:** Although there is no vapor pressure data, it is considered inhalation (vapor) and thus Category 2 was assigned due to  $LC50=1800 \text{ mg/m}^3=1.8\text{mg/L}$ .

**Skin Corrosion/Irritation:** Based on standard Draize tests for skin irritation (rabbit, 20 mg/24H, Moderate), Category 2 was assigned.

**Serious Eye Damage/ Eye Irritation:** Based on standard Draize tests for eye irritation (rabbit, 500 mg/24H, Mild), Category 2B was assigned.

**Respiratory Sensitization/Skin Sensitization:** As there are several evidences proving that inhalation causes sensitization on sensitive humans, Category 1 was assigned. Due to the risk of sensitization caused by skin contact, Category 1 was assigned.

**Germ Cell Mutagenicity:** Classification Not Possible due to no data available

**Carcinogenicity:** Classification Not Possible due to no data available

**Reproductive Toxicity:** Classification Not Possible due to no data available

**STOT/Systemic Toxicity-Single Exposure:**

Due to a description, "Category 3 (Respiratory tract irritation): May cause respiratory tract irritation." Category 3 (Respiratory tract irritation) was assigned.

Due to a description, "Category 3 (Narcotic effects): If inhaled, causes narcotic effects such as dizziness and drowsiness." Category 3 (Narcotic effects) was assigned.

**STOT/Systemic Toxicity-Repeated Exposure:** Classification Not Possible due to lack of data available.

**Aspiration Hazard:** Classification Not Possible due to no data available

Section 12. Ecological Information

**Ecotoxicity:** Not reported

**Fish Toxicity:** Not reported

**Persistence/Degradability:** Good degradability (Official Reports (May 10, 2001) on the degradability of existing chemical substances by microorganisms and the bioconcentration in the body of fish and shellfish (The Results of Safety Inspection on the CSCL Existing Chemical Substances) by Ministry of Economy, Trade and Industry

**Bioaccumulative Potential:** Not reported

**Acute Hazards to Aquatic Environment:** Classification not possible due to no data available

**Chronic Hazards to Aquatic Environment:** Due to good persistence/degradability, Not Classified was assigned.

Section 13. Disposal Considerations

**Waste Treatment Methods:** Dispose of product and contaminated packaging in accordance with all local, state, and federal environmental control regulations.



Section 14. Transport Information

**International Regulation**

**UN Class:** Class 6.1

**Subsidiary risk:** Class 3

**UN Number:** 2929

**Proper Shipping Name:** Toxic liquid, Flammable, Organic, N.O.S

**Packing Group:** II

**Marine Pollutant:** P

**Japanese Regulation**

**Transport by Land:** Fire Service Law Type 4, Class 2 Petroleum Danger Grade 3 Display 'Danger' vehicle signs in prominent places at the front and end of the vehicle. If the vehicle is a tank truck, a licensed handler of Kou or Otsu Type 4 Dangerous Goods is required to ride.

**Loading Method:** The maximum height of cargo allowed during transport is 3 meters. For transport, make sure that there is no leak on containers and load so that they may not be fallen, dropped, and damaged to ensure that the cargo should be protected from collapsing.

**Avoiding Loading Incompatibles:**

- 1) Class 1 and Class 6 Dangerous Goods
- 2) Gasses under pressure

Follow the directions below for Containers and Container Labeling for Packaged Products:

**Container:** Use containers provided in the Regulation for regulating dangerous goods, Attached List 3, 2.

**Container Labeling**

1. Class 2 Petroleums, Danger Grade 3, Allyl methacrylate
2. Quantity
3. Flames prohibited

**Transport by Sea:** Ship Safety Law, Transportation of Packaged Products (Dangerous goods, toxic substances)

**Container:** Use containers provided by Attached List of the Notification establishing the criteria for dangerous goods transported by ship.

**Container Labeling:** Refer to the Notification described above.

**Transport by Air:** Flammable liquid in the Civil Aeronautics Law is applicable. Conform to the provisions of this Law.

**Special Precautions:** Make sure that there is no damage, corrosion, leak, etc. on containers before transporting them. Load dangerous goods or containers with dangerous substance in a manner to prevent them from falling, turning, or getting damaged. Load the containers in a manner that they are certain not to result in direct sunlight exposure, damage, corrosion, leak, or collapse while being transported. If a hazard occurs due to an accident, etc. during transport, inform the nearby fire authorities and/or other related organizations. Carry a yellow card while transferring.

**First-aid Measure Index Number:** 131





Section 15. Regulatory Information

**Fire Service Law:** Dangerous goods Type 4 Class 2 Petroleums Water insoluble Specified quantity 1,000 L

**Industrial Safety and Health Law:** Dangerous Goods Flammable substance

**Ship Safety Law:** Notification of Dangerous Goods, Attached List 1 Flammable Liquids

**Civil Aeronautics Law:** Notification of Explosive Substances, etc., Attached List 1 Flammable Liquids

Section 16. Other Information

**Disclaimer:** The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.

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