# SAFETY DATA SHEET

Updated on 04/02/2026

## 1. Material Identification

**Product Name** : Methacrylic Acid
**Catalog Number** : io-406916
**CAS Number** : 79-41-4
**Identified uses** : Laboratory chemicals, manufacture of chemical compounds
**Company** : Ionz

**>> R&D Use only**

## 2. Hazards Identification

### GHS Classification:

Flammable liquid ( category 2 )
Acute toxicity, oral (Category 3)
Acute toxicity, dermal (Category 3)
Acute toxicity, inhalation (Category 3)
Specific target organ toxicity, single exposure (Category 1)

**Pictogram(s)**

**GHS Hazard Statements**

>> H302: Harmful if swallowed [Warning Acute toxicity, oral]

>> H312: Harmful in contact with skin [Warning Acute toxicity, dermal]

>> H314: Causes severe skin burns and eye damage [Danger Skin corrosion/irritation]

**Precautionary Statement Codes**

>> P260, P264, P270, P280, P301+P317, P301+P330+P331, P302+P352, P302+P361+P354, P304+P340, P305+P354+P338, P316, P317, P321, P330, P362+P364, P363, P405, and P501

**Note**

>> This chemical does not meet GHS hazard criteria for < 0.1% (1 of 3874) of reports.

**NFPA 704 Diamond**


**NFPA Health Rating**

>> 3 - Materials that, under emergency conditions, can cause serious or permanent injury.

**NFPA Fire Rating**

>> 2 - Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur. Materials would not under normal conditions form hazardous atmospheres with air, but under high ambient temperatures or under moderate heating could release vapor in sufficient quantities to produce hazardous atmospheres with air.

**NFPA Instability Rating**

>> 2 - Materials that readily undergo violent chemical changes at elevated temperatures and pressures.

**NFPA Specific Notice**

>> W - No water: Materials that react violently or explosively with water.

## DOT Hazard Classification:

The U.S. Department of Transportation (DOT) categorizes hazardous materials into nine hazard classes for transportation purposes. This section provides the summary from the Hazardous Materials Table of the 49 eCFR § 172.101. For details, please visit https://www.ecfr.gov/current/title-49/subtitle-B/chapter-I/subchapter-C/part-172

**Substance (Descriptions/Shipping Name)**

>> Methacrylic acid, stabilized

**DOT ID (UN/NA Number)**

>> UN2531

**Hazard Class/Label Code(s)**

>> Class 8 Corrosive material (49 eCFR § 173.136)

**Packing Group**

>> PG II: the degree of danger presented by the material is medium

>> For more information about the packing group assignment, please visit 49 eCFR § 173

**Placard/Label(s)**


## Health Hazards:

>> INHALATION: Severe irritation to respiratory tract. EYES: Short contact can cause severe damage. SKIN: Causes severe irritation and burns. Ingestion: High hazard - may cause death or permanent injury on short exposure to small quantities. OTHER: May affect blood pressure temporarily. (USCG, 1999)

**ERG2024, Guide 153P (Methacrylic acid, stabilized)**

>> TOXIC and/or CORROSIVE; inhalation, ingestion or skin contact with material may cause severe injury or death.

>> Methyl bromoacetate (UN2643) is an eye irritant/lachrymator (causes flow of tears).

>> Contact with molten substance may cause severe burns to skin and eyes.

>> Avoid any skin contact.

>> Fire may produce irritating, corrosive and/or toxic gases.

>> Runoff from fire control or dilution water may be corrosive and/or toxic and cause environmental contamination.

>> Special Hazards of Combustion Products: Vapor forms explosive mixtures with air. Thermal decomposition produces carbon monoxide and carbon dioxide.

>> Behavior in Fire: Vapors form explosive mixtures with air. Sealed containers may rupture explosively at elevated temperatures (polymerization). (USCG, 1999)

**ERG2024, Guide 153P (Methacrylic acid, stabilized)**

>> Combustible material: may burn but does not ignite readily.

>> When heated, vapors may form explosive mixtures with air: indoors, outdoors and sewers explosion hazards.

>> Those substances designated with a (P) may polymerize explosively when heated or involved in a fire.

>> Corrosives in contact with metals may evolve flammable hydrogen gas.

>> Containers may explode when heated.

>> Runoff may pollute waterways.

>> Substance may be transported in a molten form.

>> Combustible. Above 68Â °C explosive vapour/air mixtures may be formed.

## 3. Composition/Information On Ingredients

**Chemical name** : Methacrylic Acid
**CAS Number** : 79-41-4
**Molecular Formula** : C4H6O2
**Molecular Weight** : 86.0900 g/mol

## 4. First Aid Measures

### First Aid:

>> EYES: First check the victim for contact lenses and remove if present. Flush victim's eyes with water or normal saline solution for 20 to 30 minutes while simultaneously calling a hospital or poison control center. Do not put any ointments, oils, or medication in the victim's eyes without specific instructions from a physician. IMMEDIATELY transport the victim after flushing eyes to a hospital even if no symptoms (such as redness or irritation) develop.

>> SKIN: IMMEDIATELY flood affected skin with water while removing and isolating all contaminated clothing. Gently wash all affected skin areas thoroughly with soap and water. IMMEDIATELY call a hospital or poison control center even if no symptoms (such as redness or irritation) develop. IMMEDIATELY transport the victim to a hospital for treatment after washing the affected areas.

>> INHALATION: IMMEDIATELY leave the contaminated area; take deep breaths of fresh air. IMMEDIATELY call a physician and be prepared to transport the victim to a hospital even if no symptoms (such as wheezing, coughing, shortness of breath, or burning in the mouth, throat, or chest) develop. Provide proper respiratory protection to rescuers entering an unknown atmosphere. Whenever possible, Self-Contained Breathing Apparatus (SCBA) should be used; if not available, use a level of protection greater than or equal to that advised under Protective Clothing.

>> INGESTION: DO NOT INDUCE VOMITING. Corrosive chemicals will destroy the membranes of the mouth, throat, and esophagus and, in addition, have a high risk of being aspirated into the victim's lungs during vomiting which increases the medical problems. If the victim is conscious and not convulsing, give 1 or 2 glasses of water to dilute the chemical and IMMEDIATELY call a hospital or poison control center. IMMEDIATELY transport the victim to a hospital. If the victim is convulsing or unconscious, do not give anything by mouth, ensure that the victim's airway is open and lay the victim on his/her side with the head lower than the body. DO NOT INDUCE VOMITING. Transport the victim IMMEDIATELY to a hospital. (NTP, 1992)

**ERG2024, Guide 153P (Methacrylic acid, stabilized)**

>> General First Aid:

>> Call 911 or emergency medical service.

>> Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and avoid contamination.

>> Move victim to fresh air if it can be done safely.

>> Administer oxygen if breathing is difficult.

>> If victim is not breathing:

>> DO NOT perform mouth-to-mouth resuscitation; the victim may have ingestedor inhaled the substance.

>> If equipped and pulse detected, wash face and mouth, then give artificial respiration using a proper respiratory medical device (bag-valve mask, pocket mask equipped with a one-way valve or other device).

>> If no pulse detected or no respiratory medical device available, provide continuouscompressions. Conduct a pulse check every two minutes or monitor for any signs of spontaneous respirations.

>> Remove and isolate contaminated clothing and shoes.

>> For minor skin contact, avoid spreading material on unaffected skin.

>> In case of contact with substance, remove immediately by flushing skin or eyes with running water for at least 20 minutes.

>> For severe burns, immediate medical attention is required.

>> Effects of exposure (inhalation, ingestion, or skin contact) to substance may be delayed.

>> Keep victim calm and warm.

>> Keep victim under observation.

>> For further assistance, contact your local Poison Control Center.

>> Note: Basic Life Support (BLS) and Advanced Life Support (ALS) should be done by trained professionals.

>> Specific First Aid:

>> For corrosives, in case of contact, immediately flush skin or eyes with running water for at least 30 minutes. Additional flushing may be required.

>> Removal of solidified molten material from skin requires medical assistance.

>> In Canada, an Emergency Response Assistance Plan (ERAP) may be required for this product. Please consult the shipping paper and/or the "ERAP" section.

**First Aid Measures**

**Inhalation First Aid**

>> Fresh air, rest. Half-upright position. Refer for medical attention.

**Skin First Aid**

>> Rinse skin with plenty of water or shower for at least 15 minutes. Refer immediately for medical attention . Wear protective gloves when administering first aid.

**Eye First Aid**

>> Rinse with plenty of water for several minutes (remove contact lenses if easily possible). Refer immediately for medical attention.

**Ingestion First Aid**

>> Rinse mouth. Give nothing to drink. Do NOT induce vomiting. Refer for medical attention .

## 5. Fire Fighting Measures

>> Excerpt from ERG Guide 153 [Substances - Toxic and/or Corrosive (Combustible); polymerization hazard]:

>> SMALL FIRE: Dry chemical, CO2 or water spray.

>> LARGE FIRE: Dry chemical, CO2, alcohol-resistant foam or water spray. If it can be done safely, move undamaged containers away from the area around the fire. Dike runoff from fire control for later disposal.

>> FIRE INVOLVING TANKS, RAIL TANK CARS OR HIGHWAY TANKS: Fight fire from maximum distance or use unmanned master stream devices or monitor nozzles. Do not get water inside containers. Cool containers with flooding quantities of water until well after fire is out. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. ALWAYS stay away from tanks in direct contact with flames. (ERG, 2024)

>> Excerpt from ERG Guide 153 [Substances - Toxic and/or Corrosive (Combustible); polymerization hazard]:

>> SMALL FIRE: Dry chemical, CO2 or water spray.

>> LARGE FIRE: Dry chemical, CO2, alcohol-resistant foam or water spray. If it can be done safely, move undamaged containers away from the area around the fire. Dike runoff from fire control for later disposal.

>> FIRE INVOLVING TANKS, RAIL TANK CARS OR HIGHWAY TANKS: Fight fire from maximum distance or use unmanned master stream devices or monitor nozzles. Do not get water inside containers. Cool containers with flooding quantities of water until well after fire is out. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. ALWAYS stay away from tanks in direct contact with flames. (ERG, 2024)

>> Use alcohol-resistant foam, powder, carbon dioxide. In case of fire: keep drums, etc., cool by spraying with water.

## 6. Accidental Release Measures

### Isolation and Evacuation:

Isolation and evacuation measures to take when a large amount of this chemical is accidentally released in an emergency.

>> Excerpt from ERG Guide 153 [Substances - Toxic and/or Corrosive (Combustible); polymerization hazard]:

>> IMMEDIATE PRECAUTIONARY MEASURE: Isolate spill or leak area in all directions for at least 50 meters (150 feet) for liquids and at least 25 meters (75 feet) for solids.

>> SPILL: Increase the immediate precautionary measure distance, in the downwind direction, as necessary.

>> FIRE: If tank, rail tank car or highway tank is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions. (ERG, 2024)

**Evacuation: ERG2024, Guide 153P (Methacrylic acid, stabilized)**

>> Immediate precautionary measure

>> Isolate spill or leak area in all directions for at least 50 meters (150 feet) for liquids and at least 25 meters (75 feet) for solids.

>> Spill

>> For non-highlighted materials: increase the immediate precautionary measure distance, in the downwind direction, as necessary.

>> Fire

>> If tank, rail tank car or highway tank is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

### Spillage Disposal:

Methods for containment and safety measures to protect workers dealing with a spillage of this chemical.

>> Personal protection: complete protective clothing including self-contained breathing apparatus. Collect leaking and spilled liquid in sealable plastic containers as far as possible. Cautiously neutralize remainder with aqueous sodium carbonate or lime. Then wash away with plenty of water. Do NOT absorb in saw-dust or other combustible absorbents. Do NOT let this chemical enter the environment.

**Accidental Release Measures**

**Public Safety: ERG2024, Guide 153P (Methacrylic acid, stabilized)**

>> CALL 911. Then call emergency response telephone number on shipping paper. If shipping paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.

>> Keep unauthorized personnel away.

>> Stay upwind, uphill and/or upstream.

>> Ventilate closed spaces before entering, but only if properly trained and equipped.

**Spill or Leak: ERG2024, Guide 153P (Methacrylic acid, stabilized)**

>> ELIMINATE all ignition sources (no smoking, flares, sparks or flames) from immediate area.

>> Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

>> Stop leak if you can do it without risk.

>> Prevent entry into waterways, sewers, basements or confined areas.

>> Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.

>> DO NOT GET WATER INSIDE CONTAINERS.

## 7. Handling And Storage

### Safe Storage:

>> Separated from strong oxidants and food and feedstuffs. Cool. Keep in the dark. Keep in a well-ventilated room. Store only if stabilized. Store only in original container.

### Storage Conditions:

>> Prior to working with this chemical you should be trained on its proper handling and storage. Before entering confined space where this chemical may be present, check to make sure that an explosive concentration does not exist. Store in tightly closed containers in a cool, well ventilated area away from oxidizers (such as perchlorates, peroxides, permanganates, chlorates and nitrates). Methacrylic acid should be stored at temperatures below 15 degrees C. Sources of ignition such as smoking and open flames are prohibited where Methacrylic acid is handled, used, or stored. Wherever Methacrylic acid is used, handled, manufactured, or stored, use explosion-proof electrical equipment and fittings.

## 8. Exposure Control/ Personal Protection

**REL-TWA (Time Weighted Average)**

>> 20 ppm (70 mg/m³)

>> TWA 20 ppm (70 mg/m3) [skin]

>> none See Appendix G

>> 20.0 [ppm]

>> 20 ppm as TWA.

**TLV-TWA (Time Weighted Average)**

>> 20 ppm [1992]

**MAK (Maximale Arbeitsplatz Konzentration)**

>> 180 mg/m

**Emergency Response: ERG2024, Guide 153P (Methacrylic acid, stabilized)**

>> Small Fire

>> Dry chemical, CO2 or water spray.

>> Large Fire

>> Dry chemical, CO2, alcohol-resistant foam or water spray.

>> If it can be done safely, move undamaged containers away from the area around the fire.

>> Dike runoff from fire control for later disposal.

>> Fire Involving Tanks, Rail Tank Cars or Highway Tanks

>> Fight fire from maximum distance or use unmanned master stream devices or monitor nozzles.

>> Do not get water inside containers.

>> Cool containers with flooding quantities of water until well after fire is out.

>> Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.

>> ALWAYS stay away from tanks in direct contact with flames.

### Inhalation Risk:

>> A harmful contamination of the air will be reached rather slowly on evaporation of this substance at 20Â °C.

### Effects of Short Term Exposure:

>> The substance is corrosive to the eyes, skin and respiratory tract. Corrosive on ingestion. Inhalation of the vapour may cause lung oedema.

### Fire Prevention:

Precautionary measures to prevent fires from this chemical.

>> NO open flames. Above 68Â °C use a closed system and ventilation.

### Exposure Prevention:

Prevention measures to avoid exposure to this chemical through various routes (for example, ingestion, inhalation, skin contact, and eye contact).

>> AVOID ALL CONTACT!

### Inhalation Prevention:

Precautionary measures to avoid inhalation of this chemical.

>> Use ventilation (not if powder), local exhaust or breathing protection.

### Skin Prevention:

Precautionary measures to avoid skin exposure to this chemical.

>> Protective clothing.

### Eye Prevention:

Precautionary measures to avoid eye exposure to this chemical.

>> Wear face shield.

### Ingestion Prevention:

Precautionary measures to avoid ingestion of this chemical.

>> Do not eat, drink, or smoke during work. Wash hands before eating.

**Exposure Control and Personal Protection**

**Protective Clothing: ERG2024, Guide 153P (Methacrylic acid, stabilized)**

>> Wear positive pressure self-contained breathing apparatus (SCBA).

>> Wear chemical protective clothing that is specifically recommended by the manufacturer when there is NO RISK OF FIRE.

>> Structural firefighters' protective clothing provides thermal protection but only limited chemical protection.

**Maximum Allowable Concentration (MAK)**

>> 50.0 [ppm]

## 9. Physical And Chemical Properties

**Molecular Weight:**

>> 86.09

**Exact Mass:**

>> 86.036779430

**Physical Description:**

>> Methacrylic acid appears as a clear colorless liquid (or low-melting solid) with a pungent odor. Corrosive to metals and tissue. Flash point 170 °F. Melting point 61 °F. May polymerize exothermically if heated or contaminated. If the polymerization takes place inside a container, the container may rupture violently. Less dense than water. Vapors heavier than air. Used to make plastics.

>> COLOURLESS LIQUID OR COLOURLESS CRYSTALS WITH CHARACTERISTIC ODOUR.

**Color/Form:**

>> Clear colorless liquid or colorless crystals

**Odor:**

>> Acrid, repulsive odor

**Boiling Point:**

>> 325 °F at 760 mmHg (NTP, 1992)

>> 159-163Â °C

**Melting Point:**

>> 61 °F (NTP, 1992)

>> 16Â °C

**Flash Point:**

>> 170 °F (NTP, 1992)

>> 68Â °C c.c., 77Â °C o.c.

**Solubility:**

>> greater than or equal to 100 mg/mL at 63 °F (NTP, 1992)

>> Solubility in water, g/l at 20Â °C: 98 (soluble)

**Density:**

>> 1.015 at 68 °F (USCG, 1999) - Denser than water; will sink

>> Relative density (water = 1): 1.02

**Vapor Density:**

>> 2.97 (NTP, 1992) - Heavier than air; will sink (Relative to Air)

>> Relative vapor density (air = 1): 2.97

**Vapor Pressure:**

>> 0.65 mmHg at 68 °F ; 1 mmHg at 77 °F (NTP, 1992)

>> Vapor pressure, Pa at 25Â °C: 130

**LogP:**

>> log Kow = 0.93

>> 0.93

**Stability/Shelf Life:**

>> Acrylic acid and methacrylic acid readily polymerize in the presence of light, heat and oxygen, and also under the action of oxidizing agents such as peroxides.

**Autoignition Temperature:**

>> 752 °F (USCG, 1999)

**Decomposition:**

>> When heated to decomposition it emits acrid smoke and irritating fumes.

**Viscosity:**

>> 1.38 mPa.s at 24 °C

**Corrosivity:**

The ability of a chemical to damage or destroy other substances when it comes into contact.

>> Forms corrosive liquid at melting point

**Heat of Vaporization:**

>> 0.418 kJ/mol at 101.3 kPa (760 mm Hg)

**Surface Tension:**

>> 0.0265 N/m

**Polymerization:**

Polymerization is a process of reacting monomer molecules together in a chemical reaction to form polymer chains or three-dimensional networks.

>> POLYMERIZES EASILY, ESP ON HEATING OR IN PRESENCE OF TRACES OF HYDROCHLORIC ACID

**Refractive Index:**

>> Index of refraction: 1.43143 at 20 °C/D

**Dissociation Constants:**

>> pKa = 4.65

## 10. Stability And Reactivity

>> Soluble in water.

>> Polymerizable

## 11. Toxicological Information

**Toxicity Summary:**

**Cosmetic Ingredient Review Conclusion**

>> Based on the available animal, clinical, and other data included in this report, the CIR Expert Panel concludes that Methacrylic Acid is safe as used as a nail primer by trained professionals, but there are insufficient data for retail use by consumers.

**Cosmetic Ingredient Review Finding(s)**

>> Safe for use in cosmetics, with qualifications

**Exposure Routes:**

>> The substance can be absorbed into the body by inhalation.

>> inhalation, skin absorption, ingestion, skin and/or eye contact

**Signs and Symptoms:**

Symptoms of exposure to this chemical through various routes (for example, ingestion, inhalation, skin contact, and eye contact).

**Inhalation Exposure**

>> Cough. Burning sensation. Shortness of breath. Laboured breathing.

**Skin Exposure**

>> Redness. Pain. Skin burns. Blisters.

**Eye Exposure**

>> Redness. Pain. Loss of vision. Severe burns.

**Ingestion Exposure**

>> Burning sensation in the mouth and in the throat and chest. Abdominal pain. Nausea. Vomiting. Diarrhoea.

>> irritation eyes, skin, mucous membrane; eye, skin burns

**Target Organs:**

Organs that are affected by exposure to this chemical. Information in this section reflects human data unless otherwise noted.

>> Eyes, skin, respiratory system

**Adverse Effects:**

An adverse effect is an undesired harmful effect resulting from a medical treatment or other intervention.

>> Dermatotoxin - Skin burns.

>> Toxic Pneumonitis - Inflammation of the lungs induced by inhalation of metal fumes or toxic gases and vapors.

**Interactions:**

>> Sprague-Dawley rats (5/group) /were dosed/ orally once with a neutralized mixture (29.7% active ingredients) and an unneutralized mixture (37.4% active ingredients) of methacrylic acid-polymethacrylic acid. The neutralized and unneutralized mixtures of methacrylic acid-polymethacrylic acid were administered at doses of 4.64, 10, 17.2, 21.5, 31.6 and 46.4 g/kg and 0.464, 1.0, 2.15, 4.64, 10 and 21.5 g/kg, respectively. Observations were performed immediately and at 1, 4 and 24 hr and once daily thereafter for 14 days. No toxic effects were observed at the two lowest doses of the neutralized compound. At the two highest doses transient depression, ataxia, diarrhea and weight loss were observed with death occurring sometime after 4 hr. Congestion of the major organs and inflammation of the gastrointestinal (GI) tract were observed at death. No toxic effects were observed at the two lowest doses of the unneutralized compound. Transient weight loss occurred at the 2.15 g/kg dose and transient depression, labored respiration, ataxia and weight loss occurred at the three highest doses. Death occurred in all animals at 24 hr at the highest dose. Congested lungs and marked inflammation of the GI tract at the highest dose was observed at death; no other major abnormalities were found at necropsy with either the neutralized or unneutralized compound. The acute oral LD50 for neutralized methacrylic acid-polymethacrylic acid was 10.5 g/kg based on the 29.7% active ingredients of this mixture. The acute oralLD50 for unneutralized methacrylic acid-polymethacrylic acid was 6.7 g/kg based on the 37.4% active ingredients of this mixture.

**Antidote and Emergency Treatment:**

>> Immediate first aid: Ensure that adequate decontamination has been carried out. If patient is not breathing, start artificial respiration, preferably with a demand-valve resuscitator, bag-valve-mask device, or pocket mask, as trained. Perform CPR as necessary. Immediately flush contaminated eyes with gently flowing water. Do not induce vomiting. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain an open airway and prevent aspiration. Keep patient quiet and maintain normal body temperature. Obtain medical attention. /Organic acids and related compounds/

**Human Toxicity Excerpts:**

>> /HUMAN EXPOSURE STUDIES/ A group of six patients presenting allergic contact dermatitis to anaerobic acrylic sealants was patch-tested with various acrylates and methacrylates. The test with methacrylic acid was negative in all cases.

**Non-Human Toxicity Excerpts:**

>> /LABORATORY ANIMALS: Acute Exposure/ A guinea pig maximization test using female Hartley guinea pigs (5 animals/group). Sensitization concentrations for methacrylic acid were 0.02, 0.1, 0.2, 0.5, 1.0 and 5.0%. Dichloronitrobenzene and distilled water were used as the positive and negative control, respectively. Induction was performed in two stages. In the first stage, 50 uL of methacrylic acid was injected into a shaved area on the back, near the neck. An aqueous mixture of Freund's complete adjuvant (FCA), methacrylic acid or Methacrylic Acid plus FCA was injected at two sites. The guinea pigs were pretreated with 10% sodium lauryl sulfate in petrolatum for 24 hr during the second stage of induction which occurred two weeks later. Next, a filter paper patch soaked in 200 uL of the test substance was placed on the shaved back of the guinea pig. The patch remained in place for 48 hr. Methacrylic acid, 100 uL undiluted, was applied topically on day 22 as the challenge test. The hair on the flank was shaved and methacrylic acid was applied to the skin by the closed-patch testing technique. The challenge site was evaluated 24 hr after removal of the patch. The results from the sensitization experiments determined that a 0.2% concentration of Methacrylic Acid was to be used in the elicitation test. The challenge concentrations were 10, 25, 50 and 100% (5 animals/group) and were applied to four points on each animal. Skin reactions were evaluated after 24 and 48 h. All concentrations of Methacrylic Acid caused strong rubefaction and scab formation. The investigators had difficulty determining if these were type IV hypersensitivity reactions or simple irritation. All guinea pigs had significant responses, 7/7 on the scale used. Elicitation tests indicated that as the concentration of methacrylic acid increased, the response increased. methacrylic acid produced rubefaction at all concentrations tested.

**Non-Human Toxicity Values:**

>> LD50 MOUSE ORAL 1250 MG/KG

## EFSA OpenFoodTox:

Openfoodtox is a compilation of chemical and toxicological information on chemicals assessed by EFSA since its creation and included in already published scientific opinions.

**EFSA Outputs:**

EFSA publications and DOI for the given substance.

**EFSA Hazard Characterization: Reference Values:**

EFSA Hazard Characterization: Reference Values information.

**EFSA Genotoxicity:**

EFSA Genotoxicity information.

## 12. Ecological Information

### ICSC Environmental Data:

>> The substance is harmful to aquatic organisms.

## 13. Disposal Considerations

**Spillage Disposal**

>> Personal protection: complete protective clothing including self-contained breathing apparatus. Collect leaking and spilled liquid in sealable plastic containers as far as possible. Cautiously neutralize remainder with aqueous sodium carbonate or lime. Then wash away with plenty of water. Do NOT absorb in saw-dust or other combustible absorbents. Do NOT let this chemical enter the environment.

**Disposal Methods**

>> SRP: The most favorable course of action is to use an alternative chemical product with less inherent propensity for occupational exposure or environmental contamination. Recycle any unused portion of the material for its approved use or return it to the manufacturer or supplier. Ultimate disposal of the chemical must consider: the material's impact on air quality; potential migration in soil or water; effects on animal, aquatic, and plant life; and conformance with environmental and public health regulations.

>> Incineration.

## 14. Transport Information

**DOT**

Methacrylic Acid
8
UN Pack Group: II

**IATA**

Methacrylic Acid
8,
UN Pack Group: II

## 15. Regulatory Information

**Regulatory Information**

**The Australian Inventory of Industrial Chemicals**

>> Chemical: 2-Propenoic acid, 2-methyl-

**EFSA Legal Basis**

>> Directive (EC) No 2/1995 (Repealed by Reg. EC No 1333/2008 (amended))

**REACH Registered Substance**

>> Status: Active Update: 14-03-2023 https://echa.europa.eu/registration-dossier/-/registered-dossier/15411

**New Zealand EPA Inventory of Chemical Status**

>> 2-Propenoic acid, 2-methyl- (stabilised), (methacrylic acid): HSNO Approval: HSR001539 Approved with controls

**New Jersey Worker and Community Right to Know Act**

>> The New Jersey Worker and Community Right to Know Act requires public and private employers to provide information about hazardous substances at their workplaces. (N.J.S.A. 34:5A-1 et. seq.)

## 16. Other Information

**Other Safety Information**

**Chemical Assessment**

>> IMAP assessments - 2-Propenoic acid, 2-methyl-: Human health tier II assessment

>> IMAP assessments - 2-Propenoic acid, 2-methyl-: Environment tier I assessment

"The information provided is believed to be accurate but is not comprehensive and should be used as a reference. It reflects our current knowledge and is intended for safety guidance related to the product. This document does not constitute a warranty of the product's properties. Ionz is not responsible for any damages resulting from handling or contact with the product incorrectly."