# IDENTIFICATION OF PRODUCT

## Chemical name: Poly methylmethacrylate.

## Generic name: Poly methylmethacrylate.

## Synonyms: PMMA, acrylic resin.

## Recommended use and product use restrictions: It is used to make dentures. It must be used by trained personnel and only for dental and dental laboratory use.

## Emergency number: In case of emergency contact the Safety and Health at Work Coordination at the following numbers (+57 60 4) 403 87 60, ext. 1304, 1306.

# IDENTIFICATION OF HAZARDS

## GHS Classification:

|  |  |  |
| --- | --- | --- |
| **Health** | **Environment** | **Physical** |
| Eye irritation  Category 2B  Respiratory sensitization or cutaneous Category 1 | No data set | No data set |

## GHS labelling:

|  |  |  |
| --- | --- | --- |
| **Symbol** | **Signal word** | **Danger indication** |
|  | Attention | Causes eye irritation |
| HealthHazard | Danger | May cause allergy symptoms, asthma or breathing difficulties if inhaled |

## Precautionary indications: May cause irritation to eyes, skin and respiratory tract.

## Appearance in emergency: Odorless fine powder, irritating to the eyes if dispersed in the air.

## Potential adverse effects: Low oral toxicity dispersed in the air can cause eye irritation, cases of skin irritation are not known, no adverse evidence.

## NFPA:

Health 1

Flammability 1

Reactivity 1

## OSHA regulatory state: OSHA Regulatory Status: OSHA Regulatory Status: This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

# INFORMATION ABOUT COMPOSITION

|  |  |  |
| --- | --- | --- |
| **HAZARDOUS COMPONENTS** | | |
| **Common name** | **Concentration** | **CAS Number** |
| N.A. | N.A. | N.A. |

|  |  |  |
| --- | --- | --- |
| **NON-HAZARDOUS COMPONENTS** | | |
| **Common name** | **Concentration** | **CAS Number** |
| Polymethyl methacrylate | 90-99% | 9011-14-7 |

# FIRST AID MEASURES

## Emergency procedures and first aid in case of:

## Inhalation: Inhaling: Remove the patient from exposure, take him/her to a ventilated place. If breathing has stopped, supply rescue breathing. Get medical attention if any effect appears.

* Eye Contact: Wash immediately the patient’s eyes with plenty of water while keeping patient’s eyelids completely open. Consult an ophthalmologist.
* Skin Contact: Wash immediately the skin with plenty of water. Take off contaminated clothing. In case of appearance of any symptom (such as irritation or blisters), consult the physician.
* Ingestion: Rinse the mouth with abundant water. Drink abundant water. Do not induce vomit.

## Most important symptoms/effects (acute and/or delayed): There are not relevant data available

## Antidote: Does not apply.

## Information for doctors: There are not relevant data available

# FIRE FIGHTING MEASURES

## Flammability properties: Low flammability.

## Suitable extinction of fire: Fire can be extinguished using foam, dry powder or CO2. . Do not use direct water jets.

## Unsuitable extinction of fire: Do not use water.

## Instructions for fire extinguishing: Use special protective equipment. In long stays in the contaminated area, use an autonomous breathing equipment and adequate protective clothing. This product breaks down if heated at temperatures higher than 200 ºC (392 °F). The breaking down of this product caused by combustion or overheating can produce irritant and flammable toxic vapors.

## Firefighter’s protection: Evacuate the affected area and attack the fire at a safe distance.

## Protective equipment and firefighter’s protection: Self-contained breathing apparatus and encapsulated suit should be used.

# ACCIDENTAL RELEASE MEASURES

## Techniques, procedures, materials and protective equipment in case of:

## Small spill: Spilled powder is slippery underfoot. If spilled, use gloves to pick it up and put it in a container for its later disposal or recuperation.

* Large spill: Sweep away the spilled product and put it in a waste drum or in a plastic bag. Wash the slippery area with water. Avoid the spilled product to penetrate drainage channels. Uncontrolled throwing of waste of this product into waterways must be communicated to competent authorities.

## Environmental precautions: Avoid filtering on land and in water. In case of large spills or if the product contaminates lakes, rivers or seas inform the competent authorities, according to local legislation further considerations:

## Other considerations: Data not available.

# HANDLING AND STORAGE

## Handling: do not put this product in contact with hot materials to avoid firing. All polymers degrade somehow if overheated. Avoid eye contact. Avoid long-term skin contact. Avoid inhalation of high concentrations of this powder. Please follow firefighting measures shown above. This product must be kept away from fire sources.

## Storage: Ambient temperatures, dry place. Keep the product covered at a temperature of 30 °C (86 °F) maximum.

# EXPOSURE CONTROLS AND PERSONAL PROTECTION

## Conditions to control the exposure: Use a mask to protect yourself from powder. Also use safety goggles, and adequate face protection.

## Engineering controls: Adequate ventilation, air extractor and equipment to wash eyes in the areas of use of products.

## Personal protective equipment:

* Respiratory equipment: Wear suitable protective equipment. It is advisable to use a dust mask if the exposure levels are high.
* Eye protection: Safety goggles and full protection face shield.
* Others: Wear appropriate protective clothing.

## Exposure parameters:

* PEL (OSHA): Total powder 5 mg/mm³, 8 h, TWA, breathable powder.
* TLV ACGIH: Not available.

# PHYSICAL AND CHEMICAL PROPERTIES

* Appearance: Pearls.
* Color: Different colors, according to pigments
* Odor: odorless.
* Odor threshold: Does not apply.
* pH: Does not apply.
* Fusion point: Data not available.
* Evaporation percentage: Does not apply.
* Initial point and boiling range: Undeterminate.
* Flash point: 250 °C (482 °F)
* Evaporation rate: Does not apply
* Flammability (solid, gas): Data not available.
* Superior/inferior limit of flammability or exploding: Data not available.
* Vapour pressure: Does not apply
* Vapor density: Does not apply.
* Specific gravity or density: Data not available.
* Solubility in water: Insoluble.
* N-octanol/water partition coefficient: Data not available.
* Self-ignition temperature: The product is not self-flammable.
* Decomposition temperature: Undeterminate.
* Heat value: Data not available.
* Content of volatile organic compounds (VOC): ≤ 1%.
* Melting point: Does not apply.
* Viscosity: No data available
* Density: 1.200 g/cm3.
* Volatility percentage: Does not apply.
* Saturated vapor concentration: Does not apply
* Molecular weight: 800.000.
* Molecular formula: (C5O2H8)n

# STABILITY AND REACTIVITY

## Chemical Stability: This product is very stable. Do not heat above 200°C (392°F). Prolonged heating or the presence of a catalyst are likely to reinitiate polymerization.

## Possibility of hazardous reactions: Exothermic reaction (heat generation).

## Conditions to Avoid: Incompatibility with Peroxide or azo polymer initiators, strong acids, alkalis, and oxidizing agents; also with bases, acids, and flammable solvents.

## Incompatibility with other materials: Methyl methacrylate.

## Dangerous breaking down products: Monomer vapors.

## Hazardous polymerization: Exothermic reactions (heat generation).

# TOXICOLOGICAL INFORMATION

## Possible routes of exposure: Respiratory, dermal and ocular.

## Acute Toxicity:

* Inhalation: Health risks after inhalation of this product are not known. High concentrations of this powder can irritate the respiratory tract. High concentrations of vapors originated from overheating can irritate the respiratory tract.
* Skin contact: Cases of skin irritation caused by contact with this product are not known.
* If swallowed: This product has low oral toxicity, but if swallowed, it can irritate the gastrointestinal tract.

## Chronic Toxicity: Long-term exposure: This product has been used during many years without any evidence of adverse effects. According to different studies, there is no reason to think that polymethyl methacrylate represents a carcinogenic or mutagenic risk for people. Long-term exposures do not produce either toxic effects on embryos or fetus or teratogenic effects on pregnant mothers.

## Additional information: Data not available.

# ECOLOGICAL INFORMATION

## Ecotoxicity: Solid with low volatility. The product is insoluble in water.

## Toxicity: The product has low toxicity in aquatic organisms

## Persistence and degradability: The product is non-biodegradable on the soil. There is no evidence of degradation in the soil and water

## Potential of bioaccumulation: Has low bioaccumulation potential.

## Mobility on soil: Mobility of this product is low.

## Other adverse effects: There is not any additional information.

# DISPOSAL CONSIDERATIONS

Recycle this product if possible. Do not throw waste to water material into waterways. Observe the local regulations in force.

**WARNING:** Laws, regulations and local restrictions can change or be reinterpreted from one country to another and also, they can be different from the ones being into effect in Colombia. This is why considerations about waste disposal of product and its packing may differ from the ones appearing in this document.

# TRANSPORT INFORMATION

## Hazardous material: None.

## Class of Risk: None.

## UN Number: Not available.

## IATA Classification: Non-dangerous material.

## Packing group: None.

## Marine pollutant (Yes/No): No.

# REGULATORY INFORMATION

## In Colombia: Transportation of this product must be made according to provisions of Decree 1609 of 2002 concerning road transportation of chemical and dangerous substances.

## International Regulations: This product must be labeled according to directives of the CEE/Regulations about dangerous substances.

# IMPORTANT ADDITIONAL INFORMATION

The information registered in this document is based on our current knowledge and is given in good faith, but is not given an assurance express or implicit; neither is assumed any responsibility for the incorrect use of the product. This document is prepared according to:

* Globally Harmonized System of Classification and Labeling of Chemicals (GHS).
* Colombian Technical Norm NTC 4435:2010. Transport of Merchandises. Safety Data Sheets for Materials. Preparation (NTC).