

# Optix Material Safety Data Sheet



## MATERIAL SAFETY DATA SHEET

### 1. PRODUCT IDENTIFICATION

Material: OPTIX® Acrylic Plastic  
(includes OPTIX® Acrylic Sheet, Run-to-Size OPTIX® Acrylic Sheet, OPTIX® Acrylic (PMMA) Resin, Roll Stock OPTIX® Acrylic Sheet, OPTIX® TemperElite Green Edged Acrylic Sheet, OPTIX® Colored Acrylic Sheet, OPTIX® Non-Glare Acrylic Sheet, OPTIX® Patterned Acrylic Sheet, Acrylic Lighting Sheet, ARMADILLO AR Scratch-Resistant Acrylic Sheet, OPTIX® Frost Acrylic Sheet)

Chemical Name or Synonyms: Polymethyl methacrylate

### 2. PRODUCT COMPONENTS

<u>COMPONENTS</u>	<u>CAS REG. NO.</u>	<u>WEIGHT (%)</u>
1. Polymethyl methacrylate (PMMA)	9010-88-2	99.5 (MIN)
2. Methyl methacrylate (MMA)	80-62-6	0.5 (MAX)

### 3. PHYSICAL PROPERTIES

Appearance: Clear to opaque solid  
Odor: N/A  
Viscosity: N/A  
Melting Point: 150 C/300 F  
Boiling Point: N/A  
Vapor Pressure: N/A  
Vapor Density: N/A (Air =1)  
Specific Gravity: 1.19 (Water =1)  
pH: N/A  
Solubility in Water: Negligible  
Volatility: Negligible (Weight %)  
Evaporation Rate: Negligible (Butyl Acetate = 1)

### 4. FIRE AND EXPLOSION HAZARD INFORMATION

Flash Point: N/A  
Auto Ignition Temperature: 445 C/833 F  
Upper Explosion Limit (%): N/A  
Lower Explosion Limit (%): N/A  
Extinguishing Media: Carbon dioxide, dry chemical, or water.



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Fire Protection Equipment: Wear self-contained, positive pressure breathing apparatus (MSHA/NIOSH approved, or equivalent) and full protective gear.

Unusual Fire and Explosion Hazard: Product is combustible thermoplastic material that burns vigorously with intense heat.

## **5. WORKPLACE EXPOSURE LIMITS**

<u>COMPONENTS</u>	<u>OSHA</u>		<u>ACGIH</u>	
	<u>PEL</u>	<u>STEL</u>	<u>TLV</u>	<u>STEL</u>
1. PMMA	None	None	None	None
2. MMA	100 ppm	None	50 ppm	100 ppm
3. Nuisance dusts (as inhalable particles not otherwise specified)	5 mg/m <sup>3</sup>	None	10 mg/m <sup>3</sup>	None

MMA: 100 ppm = 410 mg/m<sup>3</sup>

## **6. HAZARD INFORMATION**

Hazard Scale: 0 = Insignificant, 1 = Slight, 2 = Moderate, 3 = High, 4 = Extreme

Health Designation: 1  
Fire Designation: 1  
Reactivity Designation: 0

Inhalation: Inhalation of vapors from heated product can cause nausea, headache, dizziness as well as irritation of lungs, nose, and throat.  
Eye Contact: Vapors from heated product can irritate the eyes.  
Ingestion: Low hazard associated with normal conditions.  
Skin Contact: Possible skin irritation. Contact with molten material can result in burns.  
Carcinogenicity: N/A

## **7. EMERGENCY AND FIRST AID PROCEDURES**

Inhalation: Move subject to fresh air.  
Eye Contact: Flush eyes with plenty of water for at least 15 minutes. Call a physician.  
Ingestion: This material is not expected to be absorbed within the gastrointestinal tract, so induction of vomiting should not be necessary.

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Skin Contact: If molten material contacts skin, cool rapidly with cold water and obtain medical attention for thermal burn.

## **8. REACTIVITY INFORMATION**

Stability: Stable  
Conditions to Avoid: Temperatures over 300°C/570°F.  
Hazardous Decomposition Products: Thermal decomposition or combustion may emit vapors, carbon monoxide, or carbon dioxide.  
Incompatible Compounds: Acids, bases, and strong oxidizing agents.

## **9. SPILL OR LEAK INFORMATION**

Sweep or scoop up and remove.

## **10. WASTE DISPOSAL**

Landfill or incinerate at a facility that complies with local, state and federal regulations.

## **11. EXPOSURE CONTROLS/PERSONAL PROTECTION MEASURES**

Respiratory Protection: None required under normal conditions. See Section 12.  
Hand Protection: Canvas or cotton gloves.  
Eye Protection: Safety glasses with side shields (ANSI Z87.1 equivalent).  
Other Protection: N/A  
Ventilation: Local exhaust ventilation systems should be constructed and installed in accordance with ANSI Z9.2 or ACGIH guidelines to control potential emissions near the source.

## **12. STORAGE AND HANDLING INFORMATION**

Maximum Storage Temperature: 99°C/210°F (softening temperature).  
Storage Measures: If material is stored under ambient temperature conditions, it is not hazardous. However, extensive storing at higher than the maximum temperature will emit vapors, carbon monoxide or carbon dioxide.  
Handling Measures: Processing of the material under high temperatures will cause hazardous emissions of vapors, carbon monoxide or carbon dioxide. Blower collecting and local exhaust ventilation systems should be installed to prevent contaminant dispersion into the air. Sawing of this product generates particulates regulated as "inert"

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or “nuisance” dusts. To minimize dust emissions, engineering controls should be employed, such as baghouse filters and cyclone separators.

## **13. REGULATORY INFORMATION**

### Environment

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA): Under section 102(a) of the Act, this product is NOT designated as hazardous. In addition, no reportable quantities and no notification requirements to the National Response Center in Washington, DC are set forth for its release from a vessel, an offshore or an onshore facility (40 CFR Part 302).

Resource Conservation and Recovery Act (RCRA): When this product becomes a waste, it is identified as solid but NOT hazardous waste under RCRA criteria (40 CFR Part 261).

Toxic Substances Control Act (TSCA): The components of this product are on the TSCA inventory list. Any impurities present in this product are exempt from listing.

Superfund Amendment and Reauthorization Act of 1986 (SARA) Title III: This product may be considered an immediate (acute) health hazard due to potential MMA emissions. However, reporting of thresholds for the material is not required because the concentration of its MMA component is below the de minimis concentration (40 CFR Part 370).

### Transportation

DOT Hazard Class: Not regulated.  
DOT Shipping Name: N/A

### Labor Awareness

This product as supplied is non-hazardous under the OSHA Hazard Communication Standard (29 CFR 1910.1200). However, under processing conditions it may become a health hazard to employees because vapors and/or particulates could be released. See Section 12 for Storage and Handling Information.



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## **14. GLOSSARY**

ACGIH	American Conference of Governmental Industrial Hygienists
CFR	Code of Federal Regulations
DOT	United States Department of Transportation
mg/m <sup>3</sup>	milligrams per cubic meter(concentration)
MMA	Methyl methacrylate
MSHA	Mine Safety and Health Administration
N/A	Not Applicable or Not Available
NIOSH	National Institute for Occupational Safety and Health
OSHA	Occupational Safety and Health Administration (Department of Labor)
PEL	Permissible Exposure Limit (time-weighted average)
PMMA	Polymethyl methacrylate
ppm	parts per million (concentration)
STEL	Short-Term Exposure Limit (15-minute)
TLV	Threshold Limit Value (time-weighted average)

The information presented herein is believed to be factual and reliable. It is offered in good faith, but without guarantee, since conditions and methods for the use of our products are beyond our control. We recommend that the prospective user determine the suitability of our products and these suggestions before adopting them on a commercial scale.