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**1. PRODUCT NAME: ACRYLIC CAST SHEET****2. COMPOSITION INFORMATION ON INGREDIENTS****Product Description:**

Clear, opal, color, or transparent tinted sheet.  
A high molecular weight acrylic sheet used in a wide range of applications.  
Acrylic polymer based on methyl methacrylate.

CAS No.: 009010-88-2

**Hazardous Ingredient(s): CAS No. symbol R Phrases**

No classifiable hazardous ingredients

**3. HAZARDS IDENTIFICATION**

Low toxicity under normal conditions of handling and use. Thermal decomposition will evolve toxic, irritant and flammable vapors. Care should be taken during thermoforming to ensure that the product is not exposed to temperatures exceeding 200 degrees Celsius. Certain machining operations, e.g. laser cutting, can give rise to toxic and corrosive fumes. Adequate ventilation MUST be used.

**4. FIRST AID MEASURES**

Inhalation: Remove patient from exposure, keep warm and at rest. Obtain medical attention if ill effects occur.

Skin Contact: Wash skin with soap and water. If symptoms develop, obtain medical attention.

Eye Contact: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Ingestion: Do not induce vomiting. Obtain medical attention if ill effects occur.

Further Medical Treatment: Symptomatic treatment and supportive therapy as indicated.

**5. FIRE-FIGHTING MEASURES**

Combustion will evolve toxic, irritant and flammable vapors.

Extinguishing Media: water spray, foam, dry powder of CO<sub>2</sub>.

Fire Fighting Protective Equipment: A self-contained breathing apparatus and suitable protective clothing should be worn in fire conditions.

**6. ACCIDENTAL RELEASE MEASURES**

Offcuts, or dust should be collected and disposed of in a safe way.

**7. HANDLING AND STORAGE****7.1 HANDLING**

These sheets are heavy and unwieldy. They should be handled with care, particularly in windy locations or outdoors. If broken or chipped, the resultant edges can be sharp and cause cuts to skin and eyes.

Take precautionary measures against static discharges.

### **Process Hazards**

All polymers degrade to some extent at their processing temperature, an effect which increases with increasing temperature.

Under normal conditions where thermoforming temperatures will not exceed 200 degrees Celsius, thermal decomposition products will include methyl methacrylate.

Certain machining operations, e.g. laser cutting, can give rise to toxic and corrosive fumes. Adequate ventilation **MUST** be used.

Other operations such as band saw cutting may give rise to strong odors.

### **7.2 STORAGE**

Keep away from heat. Store vertically on A-frames

Storage Temperature below 40 degrees Celsius.

Storage Life: Indefinite under specified storage conditions.

### **8. EXPOSURE CONTROL/PERSONAL PROTECTION**

Provide adequate ventilation, including appropriate local extraction if dusts, fumes or vapors are likely to be evolved.

Local extraction close to the cutting head must be used when laser cutting. Where suitable engineering controls are not fitted or are inadequate, wear suitable protective equipment. Consideration should be given to the work procedures involved and the potential extent of exposure as they may determine whether a higher level of protection is required.

*The following information is given as general guidance:*

Respirators:

Normal Handling: Not normally required.

Processing:

Dust - A suitable dust mask or dust respirator with filter type P may be appropriate. (EN141/EN143)

Vapor – If high levels above the occupational exposure limit are likely, a suitable mask with filter type A may be appropriate. (EN141/EN143)

Eye Protection:

Wear eye/face protection. Safety spectacles/goggles/full face shield.

Gloves:

Sharp edges may cause cuts. Wear suitable gloves.

Other:

Wear suitable protective clothing. For information regarding process hazards refer to Section 7, Handling and Storage.

*The following values apply to substances which may be evolved during thermal processing.*

**Occupational Exposure Limits: LTEL 8hr TWA STEL Time**

**Hazardous Ingredients: ppm mg/m<sup>3</sup> ppm mg/m<sup>3</sup> mins**

Methyl Methacrylate 50 250 100 410 OES

*(Methacrylic acid methyl ester)*

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Form: Sheet

Color: opal tint, color, or clear

Odor: odorless

PH (Value): Not applicable

Boiling Point: (Degrees Celsius): Not applicable

Melting Point: (Degrees Celsius): Not applicable

Flash Point: (Degrees Celsius): 11.5 (MMA). Sheet has no flash point.

Flammable Limits: Not applicable.

Smoke Density, % ASTM D 2843-77): 5 max

Auto Ignition Temperature (Degrees Celsius): 421 MMA

Explosive Properties: Not applicable.

Oxidizing Properties: Not applicable.

Vapor Pressure (Pascal): Not applicable.

Density (g/ml): 1.19

Solubility (Water): Insoluble.

Solubility (Other): Soluble in most organic solvents, acetone and chlorinated hydrocarbons.

Partition Coefficient: Not applicable.

Freezing Point (Degrees Celsius): Not applicable.

Softening Point (Degrees Celsius): >100

## 10. STABILITY AND REACTIVITY

Hazardous Reactions: None known.

Hazardous Decomposition Product(s): Methyl methacrylate, ethyl acrylate, sulphides, and traces of Acrolein.

## 11. TOXICOLOGICAL INFORMATION

Inhalation: Unlikely route of exposure.

Skin Contact: No evidence of irritant effects from normal handling and use. Sharp edges may cause cuts.

Eye Contact: Swarf or dust may cause irritation. Sharp off-cuts may cause eye damage.

Ingestion: Unlikely to be hazardous if swallowed.

Long Term Exposure: No known hazards are associated with the use of this material.

## 12. ECOLOGICAL INFORMATION

This environmental hazard assessment is based on information available on similar products.

### Environmental Fate and Distribution

High tonnage material produced in partially contained systems. Solid with low volatility. The product is essentially insoluble in water. The product has low potential for bioaccumulation. The product has low mobility in soil.

### Persistence and Degradation

The product is non-biodegradable in soil. There is no evidence of degradation in soil and water.

### Toxicity

The product is predicted to have low toxicity to aquatic organisms. WGK 0 (self classification)

**Effect of Effluent Treatment**

Unlikely to have an effect on effluent treatment systems. The material is essentially insoluble in water and can therefore be separated from aqueous medium by sedimentation and filtration processes at an efficient treatment plant.

**13. DISPOSAL CONSIDERATIONS**

Large quantities of waste may be recoverable. Contact supplier for specialized advice.

Disposal should be in accordance with local, state or national legislation. Incineration may be used to recover energy value. Bury on an authorized landfill site or incinerate under approved controlled conditions.

**14. TRANSPORT INFORMATION**

Not Classified as Dangerous Transport.

**15. REGULATORY INFORMATION**

Not Classified as Dangerous for Supply/Use

EC Classification: Under the Classification, Packaging and Labeling of Dangerous Substances Regs., 1984, this material is not dangerous for supply or conveyance.

**16. OTHER INFORMATION**

This data sheet was prepared in accordance with Directive 93/112/EC.

For other technical information, contact the address in Section 1.

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**GLOSSARY**

OES: Occupational Exposure Standard (UK HSE EH40)  
MEL: Maximum Exposure Limit (UK HSE EH40)  
LTEL: Long Term Exposure Limit  
STEL: Short Term Exposure Limit  
TWA: Time Weighted Average  
SK: Can be absorbed through skin.