

# SDS - Plexicast Acrylic



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## SECTION 1: IDENTIFICATION OF SUBSTANCE/ PREPARATION AND COMPANY/ UNDERTAKING

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Product Name : Plexicast® Cast Acrylic Sheet: Clear and Coloured  
Company : A&C Plastics, Inc.  
6135 Northdale St.  
Houston, TX 77087  
www.acplastics.com

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## SECTION 2: COMPOSITION/ INFORMATION ON INGREDIENTS

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Product Description : Clear or coloured sheet.  
A high molecular weight acrylic sheet used in a wide range of application.  
Polymethylmethacrylate: greater than 90%  
HS CODE: 3920.51.110  
Hazardous Ingredient(s) : No classifiable hazardous ingredient(s).

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## SECTION 3: HAZARDS IDENTIFICATION

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Low toxicity under normal conditions of handling and use. Thermal decomposition will evolve toxic, irritant and flammable vapours. Care should be taken during thermoforming to ensure that the product is not exposed to temperatures exceeding 200°C

Certain machining operations eg. Laser cutting may give rise to toxic and corrosive fumes.  
Adequate ventilation MUST be used.

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## SECTION 4: FIRST-AID MEASURES

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

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## Further Medical Treatment

Symptomatic treatment and supportive therapy as indicated.

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## SECTION 5: FIRE-FIGHTING MEASURES

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Combustion will evolve toxic, irritant and flammable vapours.

Extinguishing Media : Water spray, foam, dry powder or CO<sub>2</sub>.

Fire-Fighting Protective : A self contained breathing apparatus and suitable protective clothing should

Equipment be worn in fire conditions.

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## SECTION 6: ACCIDENTAL RELEASE MEASURES

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

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## SECTION 7: handling and STORAGE

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### 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 temperature will not exceed 200°C thermal decomposition product will include methylmethacrylate.

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

### 7.2 Storage

Keep away from heat. Store material in a cool dry place.

Storage Temperature: below 40°C

Storage Life: Indefinite under specified storage conditions

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## SECTION 8: EXPOSURE CONTROLS/ PERSONAL PROTECTION

Provide adequate ventilation including appropriate local extraction if dusts, fumes or vapours 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** : Under normal handling or processing conditions, no respiratory protection is required.  
Dust: A suitable dust mask or dust respirator with filter may be appropriate.  
Vapour: If high levels of vapour above the Occupational Exposure Limit are likely, a suitable mask with filter may be appropriate.
- Eye Protection** : Wear eye/ face protection. Safety spectacles/ goggles/ full face shield.
- Skin Protection** : 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

| Hazardous Ingredient(s)                             | LTEL 8hr TWA<br>ppm | LTEL 8hr TWA<br>mg/m <sup>3</sup> | STEL ppm | STEL mg/m <sup>3</sup> |
|-----------------------------------------------------|---------------------|-----------------------------------|----------|------------------------|
| Methyl Methacrylate (Methacrylic acid methyl ester) | 50                  | 205                               | 100      | 410                    |

## SECTION 9: PHYSICAL

- Form** : sheet
- Colour** : clear or coloured
- Odour** : odourless
- pH (Value)** : not applicable
- Boiling Point (°C)** : not applicable
- Melting Point (°C)** : not applicable
- Flash Point (°C)** : 11.5 (MMA). Sheet has no flash point
- Flammable Limits** : not applicable

A&C Plastics has no control over the conditions under which this material is used and therefore does not guarantee that results described herein will be achieved. Each user is responsible for conducting their own tests to determine the material's suitability for their specific application. A&C Plastics and its distributors assume no liability for losses resulting from improper installation or use of the material. As part of our policy of continuous product development, please verify with A&C Plastics that you have the most current information available.

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|                                         |                                                                          |
|-----------------------------------------|--------------------------------------------------------------------------|
| Auto Ignition Temperature (°C)          | : 421 (MMA)                                                              |
| Explosive Properties                    | : non explosive                                                          |
| Oxidising Properties                    | : non oxidising                                                          |
| Vapour Pressure (Pascal) Density (g/ml) | : not applicable                                                         |
| Solubility (Water)                      | : 1.19                                                                   |
| Solubility (Other)                      | : insoluble                                                              |
| Partition Coefficient                   | : soluble in most organic solvents, acetone and chlorinated hydrocarbons |
| Decomposition Temperature (°C)          | : not applicable                                                         |
| Freezing point (°C)                     | : will not decompose below 200°C                                         |
| Softening point (°C)                    | : not applicable                                                         |
| Viscosity (°C)                          | : > 100                                                                  |
|                                         | : solid                                                                  |

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## SECTION 10: STABILITY AND REACTIVITY

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Stable under normal and recommended handling and storage conditions, refer to Section 7, Handling and Storage

Hazardous Reaction : none known

Hazardous Decomposition Product(s) : Methyl methacrylate, traces of Acrolein.

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## SECTION 11: TOXICOLOGICAL INFORMATION

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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.

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## Ingestion

Unlikely to be hazardous if swallowed.

## Long Term Exposure

No known hazards are associated with the use of this material.

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## SECTION 12: ECOLOGICAL INFORMATION

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Some coloured grades will contain heavy metal based pigments, eg. cobalt and cadmium. This environmental hazard assessment is based on information available on similar products.

### Environmental Fate and Distribution

Medium tonnage material used 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. Heavy metal based pigments will not leach from waste material.

### 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 number: WGK 0

### Effect on 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 effluent treatment plant.

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## SECTION 13: DISPOSAL CONSIDERATIONS

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

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Disposal should be in accordance with all applicable local, state or national legislation.

Incineration may be used to recover energy value. Bury on an authorised landfill site or incineration under approved controlled conditions, using incineration suitable for the disposal of noxious chemical waste.

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## SECTION 14: TRANSPORTATION INFORMATION

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Not Classified as Dangerous for Transport.

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## SECTION 15: REGULATORY INFORMATION

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Not Classified as Dangerous for Supply/ Use.

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

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## SECTION 16: OTHER INFORMATION

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All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot quarantine that these are the hazards which exist.

Information contained in this publication or as otherwise supplied to Users is believed to be accurate and is given in good faith, but it is for the Users to satisfy themselves of the suitability of the product for their own particular purpose. A&C gives no warranty as to the fitness of the product for any particular purpose and any implied warranty or condition (statutory or otherwise) is excluded except to the extent that exclusion is prevented by law. A&C accepts no liability for loss or damage, resulting from reliance on this information. Freedom under Patents, Copyright and Designs cannot be assumed.

## GLOSSARY

LTEL : Long Term Exposure Limit

STEL : Short Term Exposure Limit

TWA : Time Weighted Average

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