

Polygal Multiwall Polycarbonate Sheets

Material Safety Data Sheet (MSDS)

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1. Identification of the substance, preparation and manufacturer:

Hollow Profile Sheet made of Polycarbonate

Cas # : Not Applicable

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2. Composition/Information on Ingredients:

Polycarbonate Polymer

3. Hazard Identifications:

Emergency Overview:

Sheets have almost no odor. Can burn in fire creating dense toxic smoke. If heated to melt-point the molten plastic can cause severe thermal burns.

Secondary operations, such as grinding, sanding or sawing can produce dust, which may create a respiratory or explosion hazard.

Potential Health Effects

EYE: Product may cause irritation or injury due to mechanical action.

SKIN: Sheets are not likely to cause skin irritation. If heated to melt-point the molten plastic can cause severe thermal burns.

INGESTION: Not acutely toxic.

INHALATION: Unlikely due to physical form.

CHRONIC/CARCINOGENICITY: Not listed

MEDICAL RESTRICTIONS: There are no known human health effects aggravated by exposure to this product.

4. First-Aid Measures:

EMERGENCY AND FIRST AID INFORMATION:

EYES: Remove contact lenses at once. Immediately flush eyes well with copious quantities of water or normal saline for at least 20-30 minutes. If irritation persists, seek medical attention.

SKIN: Wash skin thoroughly with soap and water. Seek medical attention if rash or burn occurs.

INGESTION: Not probable. If large amount is swallowed, seek medical attention.

INHALATION: Not likely due to physical form.

BURNS: Burns by molten material must receive medical attention. Do not try to remove melted PC from skin.

5. Fire-Fighting Measures:

Extinguishing materials: water spray is recommended due to its cooling capacity. Other materials such as extinguishing powder, CO₂, Foam, dry powder are also possible.

Firemen must wear self-contained breathing apparatus.

FLASH POINT: Not applicable

AUTO IGNITION TEMPERATURE: 630°C (1166°F) estimated

LOWER EXPOSURE LIMIT(%): Not established

UPPER EXPOSURE LIMIT (%): Not established

HAZARDOUS COMBUSTION BY-PRODUCTS: Hazardous combustion by-products may include intense heat, dense black smoke, carbon monoxide, carbon dioxide and hydrocarbon fragments.

6. Accidental Release Measures:

Sweep or gather up material mechanically.

7. Handling and Storage:

Ensure adequate ventilation or exhaust ventilation in the working area. Dust must be removed by effective exhaust ventilation.

Avoid contact or proximity with PVC plasticizers (phthalates).

Store in a dry place away from moisture, excessive heat and sources of combustion.

8. Exposure Controls / Personal Protection:

No specific exposure related hazards are known.

Wear protective gloves while handling sheets.

If dust is produced from reworking (sawing, grinding, etc) an approved respirator or mask should be used for protection from dust.

9. Physical and Chemical Properties:

Form: Hollow Plastic Sheet

Color: Colorless or pigmented - Clear, Opal Ice, Bronze, Blue, Green, Grey and others

Odor: Odorless

Softening Point: 150-160°C (300-320°F)

Density: Raw Material: 1200 kg/m³ at 20°C
Sheet: 125-250 kg/m³

Vapor Pressure: Not Applicable

Viscosity: Not Applicable

Solubility in Water: Insoluble

pH Value: Not Applicable

Flash Ignition Temperature: > 450°C (842°F)

Self Ignition Temperature: > 450°C (842°F)

Explosive Limit: Not Applicable

10. Stability and Reactivity:

Thermal decomposition: Decomposition begins at 380°C (716°F).

Hazardous decomposition products: in cases of smoldering and incomplete combustion, toxic fumes mainly consisting of CO and CO₂ may develop as well as traces of Aliphatic and Aromatic Hydrocarbons, Aldehydes, Acids, Phenol and Phenol-derivatives.

Hazardous reactions: No hazardous reactions observed.

11. Toxicological Information:

EYE: Product not considered as a primary eye irritant.

SKIN: Product not considered as a primary skin irritant.

Dermal LD50 (rabbit) >2g/kg estimated.

ACUTE ORAL: Oral LD50 (rat) >5g/kg estimated

12. Ecological Information

WATER: Water pollution class (WGK): 0 – not generally hazardous to water.

GENERAL: Not expected to present any significant ecological problems.

DISPOSAL CONSIDERATIONS

Recycle and Discharge: The product is suitable for mechanical recycling. After appropriate treatment it can be remelted and processed into new molded articles. Mechanical recycling is possible if the material has been selectively retrieved and carefully segregated according to type.

May be discharged or incinerated together with household refuse if local official regulations are observed.

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Sweep or gather up material and place in proper container for disposal or recovery.

14. Transport Information

DOT HAZARD CLASS: Not regulated

PROPER SHIPPING NAME: Not regulated

IDENTIFICATION NUMBER: Not listed

OTHER INFORMATION: Not Dangerous Cargo. Keep Dry.

15. Regulatory Information

REACH: This product is classified as an “article” and does not require registration or notification to the European Chemical Agency. This product does not contain reportable quantities of substances subject to supplier notification.

RoHS: This product complies with RoHS - it does not intentionally contain banned chemicals.

Labeling: No special labeling is required in accordance with the EEC directives.

Dust: Dust resulting from mechanical re-working (e.g. cutting grinding, etc) should meet appropriate regulations regarding maximum values for fine dusts.

16. Other Information

The safety data sheet is valid for Polycarbonate.

The trade names of the base resins used in producing this product are "Makrolon" of Bayer Material Science, "Lexan" of SABIC Innovative Plastics and "Novarex" of Mitsubishi Engineering-Plastics Corp. Japan.

Pigments and additives used to enhance specific properties are encapsulated in the polymer resin matrix, and/or on the sheet surface.