

# MATERIAL SAFETY DATA SHEET

## Sheffield Plastics Inc.

A  Bayer MaterialScience Company

### Sheffield Plastics Inc.

119 Salisbury Road  
Sheffield, MA 01257  
USA

### TRANSPORTATION EMERGENCY

CALL CHEMTREC: (800) 424-9300  
INTERNATIONAL: (703) 527-3887

### NON-TRANSPORTATION

Bayer Emergency Phone: (412)-923-1800  
Bayer Information Phone: (800) 662-2927

## 1. Product and Company Identification

**Product Name:** Makrolon Hygard MS1250 Sheet  
**Material Number:** SH009605  
**Chemical Family:** Thermoplastic Polymer Sheet  
**Chemical Name:** Bisphenol A Polycarbonate

## 2. Hazards Identification

### Emergency Overview

**CAUTION! Color:** tint **Form:** solid sheets **Odor:** slight.  
Melted product is flammable and produces intense heat and dense smoke during burning. Irritating gases/fumes may be given off during burning or thermal decomposition. May cause mechanical irritation (abrasion). Contact with hot material will cause thermal burns.

### Potential Health Effects

**Primary Routes of Entry:** Inhalation, Skin Contact, Eye Contact

**Medical Conditions Aggravated by Exposure:** Respiratory disorders

### HUMAN EFFECTS AND SYMPTOMS OF OVEREXPOSURE

#### Skin

##### Acute Skin

**For Product: Makrolon Hygard MS1250 Sheet**

Contact with heated material can cause thermal burns.

#### Eye

##### Acute Eye

**For Product: Makrolon Hygard MS1250 Sheet**

May cause mechanical irritation.

#### General Effects of Exposure

Material Name: Makrolon Hygard MS1250 Sheet

Article Number: SH009605

**Acute Effects of Exposure****For Product: Makrolon Hygard MS1250 Sheet**

Gases and fumes evolved during the thermal processing or decomposition of this material may irritate the eyes, skin or respiratory tract.

**Chronic Effects of Exposure****For Product: Makrolon Hygard MS1250 Sheet**

Not expected to cause any adverse chronic health effects.

**Carcinogenicity:**

No Carcinogenic substances as defined by IARC, NTP and/or OSHA

**3. Composition/Information on Ingredients****Hazardous Components**

This material is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

**OTHER INGREDIENTS**

Additional types of polycarbonate may be used as necessary to adjust the melt flow rate.

**4. First Aid Measures****Eye Contact**

In case of contact, flush eyes with plenty of lukewarm water.

**Skin Contact**

In case of skin contact, wash affected areas with soap and water. Get medical attention if thermal burn occurs.

**Inhalation**

If inhaled, remove to fresh air.

**Ingestion**

Get medical attention.

**5. Fire-Fighting Measures**

**Suitable Extinguishing Media:** water, foam, dry chemical, carbon dioxide (CO2)

**Special Fire Fighting Procedures**

Firefighters should be equipped with self-contained breathing apparatus to protect against potentially toxic and irritating fumes.

**Unusual Fire/Explosion Hazards**

Toxic and irritating gases/fumes may be given off during burning or thermal decomposition. Dust may form explosive mixtures with air.

## 6. Accidental release measures

### Spill and Leak Procedures

If molten, allow material to cool and place into an appropriate marked container for disposal.

## 7. Handling and Storage

### Storage Temperature:

**maximum:** 93 °C (199.4 °F)

### Storage Period

Not Established

### Handling/Storage Precautions

Handle in accordance with good industrial hygiene and safety practices. Wash thoroughly after handling. Avoid breathing dust.

### Further Info on Storage Conditions

Protect equipment (e.g. storage bins, conveyors, dust collectors) with explosion vents.

## 8. Exposure Controls / Personal Protection

Country specific exposure limits have not been established or are not applicable

### Industrial Hygiene/Ventilation Measures

General dilution and local exhaust as necessary to control airborne vapors, mists, dusts and thermal decomposition products below appropriate airborne concentration standards/guidelines, especially during cutting, grinding and high heat operations.

### Respiratory Protection

Although no exposure limit has been established for this product, the OSHA PEL for Particulates Not Otherwise Regulated (PNOR) of 15 mg/m<sup>3</sup> - total dust, 5 mg/m<sup>3</sup> - respirable fraction is recommended. In addition, the ACGIH recommends 3 mg/m<sup>3</sup> - respirable particles and 10 mg/m<sup>3</sup> - inhalable particles for Particles (insoluble or poorly soluble) Not Otherwise Specified (PNOS).

### Hand Protection

Wear heat resistant gloves when handling molten material.

### Eye Protection

safety glasses with side-shields.

### Skin and body protection

No special skin protection requirements during normal handling and use.

### Additional Protective Measures

Employees should wash their hands and face before eating, drinking, or using tobacco products. Educate and train employees in the safe use and handling of this product. Purgings should be collected as small flat thin shapes or thin strands to allow for rapid cooling.

## 9. Physical and chemical properties

<b>Form:</b>	solid
<b>Appearance:</b>	sheets
<b>Color:</b>	tint
<b>Odor:</b>	slight
<b>pH:</b>	not applicable
<b>Melting Point:</b>	220 - 230 °C (428 - 446 °F)
<b>Boiling Point/Range:</b>	not applicable
<b>Flash Point:</b>	> 450 °C (> 842 °F)
<b>Lower Explosion Limit:</b>	Not Established
<b>Upper Explosion Limit:</b>	Not Established
<b>Vapor Pressure:</b>	not applicable
<b>Specific Gravity:</b>	approximately 1.2
<b>Solubility in Water:</b>	Insoluble
<b>Autoignition Temperature:</b>	> 450 °C (> 842 °F)
<b>Decomposition Temperature:</b>	380 °C (716 °F)
<b>Softening Point:</b>	150 - 160 °C (302 - 320 °F)
<b>Bulk Density:</b>	38 - 42 lb/ft <sup>3</sup>

## 10. Stability and Reactivity

### Hazardous Reactions

Hazardous polymerization does not occur.

### Stability

Stable

### Materials to avoid

None known.

### Conditions to avoid

None known.

### Hazardous decomposition products

By Fire and Thermal Decomposition: Carbon Dioxide; Bisphenol A; Phenol; Carbonic Acid, Diphenyl Ester; Carbon monoxide, hydrocarbons, phenol derivatives

## 11. Toxicological Information

### Toxicity Data for Polymethylmethacrylate

#### Acute Oral Toxicity

LD50: > 2,000 mg/kg (Rat)

#### Acute Inhalation Toxicity

LC50: > 2 mg/l, 4 hrs (Rat)

#### Acute dermal toxicity

LD50: > 3,000 mg/kg (rabbit)

#### Mutagenicity

Genetic Toxicity in Vitro:

Micronucleus test: positive (human lymphocytes)

## 12. Ecological Information

No information available.

## 13. Disposal considerations

### Waste Disposal Method

Waste disposal should be in accordance with existing federal, state and local environmental control laws.

## 14. Transportation information

### Land transport (DOT)

Non-Regulated

### Sea transport (IMDG)

Non-Regulated

### Air transport (ICAO/IATA)

Non-Regulated

## 15. Regulatory Information

### United States Federal Regulations

OSHA Hazcom Standard Rating: Non-Hazardous

US. Toxic Substances Control Act: Listed on the TSCA Inventory.

US. EPA CERCLA Hazardous Substances (40 CFR 302):

### Components

None

SARA Section 311/312 Hazard Categories:

Non-hazardous under Section 311/312

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III  
Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A):

### Components

None

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III  
Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required:

### Components

None

**US. EPA Resource Conservation and Recovery Act (RCRA) Composite List of Hazardous Wastes and Appendix VIII Hazardous Constituents (40 CFR 261):**

If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste. (40 CFR 261.20-24)

**State Right-To-Know Information**

The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

The concentrations reported below in units of parts per million (ppm) or parts per billion (ppb) are maximum values.

**Massachusetts, New Jersey or Pennsylvania Right to Know Substance Lists:**

<u>Weight %</u>	<u>Components</u>	<u>CAS-No.</u>
>=1%	Bisphenol A Polycarbonate	25971-63-5
>=1%	Polymethylmethacrylate	9011-14-7
>=1%	Polyurethane polyether elastomer	

**New Jersey Environmental Hazardous Substances List and/or New Jersey RTK Special Hazardous Substances Lists:**

<u>Weight %</u>	<u>Components</u>	<u>CAS-No.</u>
0.1 - 1%	Propylene Glycol Methyl Ether	107-98-2

**MA Right to Know Extraordinarily Hazardous Substance List:**

<u>Weight %</u>	<u>Components</u>	<u>CAS-No.</u>
3 ppm	Methylene Chloride	75-09-2

**California Prop. 65:**

**Warning! This product contains chemical(s) known to the State of California to be Carcinogenic.**

<u>Weight %</u>	<u>Components</u>	<u>CAS-No.</u>
<3 ppm	Methylene Chloride	75-09-2

**16. Other Information**

**HMIS Rating**

<b>Health</b>	0
<b>Flammability</b>	1
<b>Physical Hazard</b>	0

0=Minimal 1=Slight 2=Moderate 3=Serious 4=Severe

\* = Chronic Health Hazard

The method of hazard communication for Sheffield Plastics Inc. is comprised of Product Labels and Material Safety Data Sheets. HMIS and NFPA ratings are provided by Sheffield Plastics Inc. as a customer service.

Contact Person: Product Safety Department  
Telephone: (412) 777-2835  
MSDS Number: 000000009605

Material Name: Makrolon Hygard MS1250 Sheet Article Number: SH009605

Version Date: 05/12/2008  
Report Version: 1.0

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