MATERIAL SAFETY DATA SHEET

Sheffield Plastics
A Bayer MaterialScience LLC Business

Sheffield Plastics
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USA

TRANSPORTATION EMERGENCY

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

NON-TRANSPORTATION

Emergency Phone:	Call Chemtrec
Information Phone:	(800) 662-2927

1. Product and Company Identification

Product Name:	Makrolon ® SL Polycarbonate Sheet
Material Number:	80471700
Chemical Family:	Thermoplastic Polymer Sheet

2. Hazards Identification

Emergency Overview

Caution: Color: tint **Form:** solid sheets **Odor:** odourless.
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. 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 ® SL Polycarbonate Sheet
Contact with heated material can cause thermal burns.

Ingestion
Acute Ingestion
For Product: Makrolon ® SL Polycarbonate Sheet
Ingestion is not a typical route of industrial exposure.

General Effects of Exposure

Acute Effects of Exposure
For Product: Makrolon ® SL Polycarbonate 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 ® SL Polycarbonate 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.

4. First aid measures

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

Skin contact
Cool melted product on skin with plenty of water. Do not remove solidified product. Get medical attention if thermal burn occurs.

Inhalation
Move to fresh air in case of accidental inhalation of dust or fumes from overheating or combustion.

Ingestion
Get medical attention.

5. Fire-fighting measures

Suitable extinguishing media: Water fog, 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.

6. Accidental release measures

Spill and Leak Procedures
If molten, allow material to cool and place into an appropriate marked container for disposal. Sweep up and shovel into suitable containers for disposal.

7. Handling and storage

Storage temperature:
maximum: 49 °C (120.2 °F)

Storage period
Containers should be tightly closed to prevent contamination with foreign materials and moisture.

Handling/Storage Precautions
Handle in accordance with good industrial hygiene and safety practices. Wash thoroughly after handling. Avoid creating 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
In the case of dust or aerosol formation use respirator with an approved filter.

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

Form:	solid
Appearance:	sheets
Color:	tint
Odor:	odourless
pH:	not applicable
Flash point:	> 450 °C (> 842 °F)
Lower explosion limit:	Not Established

Upper explosion limit:	Not Established
Vapour pressure:	not applicable
Solubility in Water:	Insoluble
Autoignition temperature:	> 450 °C (> 842 °F)
Decomposition temperature:	Approximately 380 °C (716 °F)
Softening point:	Begins at 70 °C (158 °F)
Bulk density:	Approximately 608.7 kg/m3

10. Stability and reactivity

Hazardous Reactions
Hazardous polymerisation does not occur.

Stability
Stable

Materials to avoid
None known.

Conditions to avoid
None known.

Hazardous decomposition products
By Fire and Thermal Decomposition: Phenol; Carbon oxides, Hazardous decomposition products due to incomplete combustion.

11. Toxicological information

Toxicity Data for Makrolon ® SL Polycarbonate Sheet
Toxicity Note
No data available for this product.

Toxicity Data for Benzotriazole derivative
Acute oral toxicity
LD50: > 5,000 mg/kg (Rat)

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

Skin irritation
rabbit, Non-irritating

Eye irritation
rabbit, Non-irritating

Sensitisation
dermal: non-sensitizer (Guinea pig, Magnusson/Kligmann (Maximization Test))

Repeated dose toxicity
28 Days, oral: NOAEL: 1,000 mg/kg, (Rat,)
93 Days, oral: NOAEL: 1,000 mg/kg, (Rat,)

Mutagenicity
Genetic Toxicity in Vitro:

Ames: Negative results were reported in various in vitro studies. (Salmonella typhimurium)

12. Ecological information

Ecological Data for Makrolon ® SL Polycarbonate Sheet
Additional Ecotoxicological Remarks
No data available for this product.

Ecological Data for Benzotriazole derivative
Biodegradation
Not readily biodegradable.

Chemical Oxygen Demand (COD)
1,870 mg/g

Acute and Prolonged Toxicity to Fish
LC50: > 10 mg/l (Rainbow (Donaldson)Trout (Oncorhynchus mykiss), 96 h)

Acute Toxicity to Aquatic Invertebrates
LC50: > 100 mg/l (Water flea (Daphnia magna), 24 h)

Toxicity to Aquatic Plants
EC50: > 2 mg/l, (other: algae)

Toxicity to Microorganisms
EC50: > 100 mg/l, (Wastewater bacteria, 3 h)

13. Disposal considerations

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

14. Transport 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.

SNUR Components

Mercury 7439-97-6	US. Toxic Substances Control Act (TSCA) Section 5(a)(2) Proposed Significant New Use Rules (SNURs) (40 CFR 721, Subpt E)

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):
Under RCRA, it is the responsibility of the person who generates a solid waste, as defined in 40 CFR 261.2, to determine if that waste is a hazardous waste.

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:

Weight percent	Components	CAS-No.
>=1%	Bisphenol A Polycarbonate	25971-63-5
>=1%	Bisphenol A Polycarbonate	CAS# is a trade secret
>=1%	Ultraviolet Light Stabilizer	CAS# is a trade secret

MA Right to Know Extraordinarily Hazardous Substance List:

Weight percent	Components	CAS-No.
<=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.

Weight percent	Components	CAS-No.
<=3 ppm	Methylene Chloride	75-09-2

16. Other information

HMIS Rating

Health	0
Flammability	1
Physical Hazard	0

0=Minimal 1=Slight 2=Moderate 3=Serious 4=Severe
* = Chronic Health Hazard

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

Contact person:	Product Safety Department
Telephone:	(412) 777-2835
MSDS Number:	112000028898
Version Date:	02/27/2010
Report version:	1.5

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