

# Material Safety Data Sheet

## PRODUCT AND COMPANY IDENTIFICATION

Product Name:	MAKROLON LUMEN XT COOL-LOW DF LC3, TEXTURE
Material Number:	58095072
Chemical Family:	Thermoplastic Polymer Sheet
Chemical Name:	Bisphenol A Polycarbonate

## HAZARDS IDENTIFICATION

### Emergency Overview

#### Caution:

Color: White, Translucent

Form: Solid Sheets

Odor: Odorless

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. Causes a slipping hazard if spilled. 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 LUMEN XT COOL-LOW DF LC3, TEXTURE

Contact with heated material can cause thermal burns.

#### Eye

Acute Eye for Product: MAKROLON LUMEN XT COOL-LOW DF LC3, TEXTURE

May cause mechanical irritation.

#### Ingestion

Acute Ingestion for Product: MAKROLON LUMEN XT COOL-LOW DF LC3, TEXTURE

Ingestion is not a typical route of industrial exposure.



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## General Effects of Exposure

### Acute Effects of

### Exposure for Product:

MAKROLON LUMEN XT COOL-LOW DF LC3, TEXTURE

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 LUMEN XT COOL-LOW DF LC3, TEXTURE

Not expected to cause any adverse chronic health effects.

### Carcinogenicity:

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

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## 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.

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## 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 a 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.

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## FIREFIGHTING MEASURES

### Suitable Extinguishing Media:

Water fog, Dry chemical, Carbon dioxide (CO<sub>2</sub>)

### Special Firefighting 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.



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## 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.

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## HANDLING AND STORAGE

Storage Temperature Maximum: 49 °C (120.2 °F) Storage period

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.

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## 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.



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## PHYSICAL AND CHEMICAL PROPERTIES

Form:	solid
Appearance:	sheets
Color:	white, translucent
Odor:	Odorless
pH:	not applicable
Melting Point:	220 - 230 °C (428 - 446 °F)
Density:	ca. 1.2 g/cm <sup>3</sup> @ 20 °C (68 °F) (DIN 53479)
Solubility in Water:	insoluble
Autoignition Temperature:	> 450 °C (842 °F)
Decomposition Temperature:	>= 380 °C (716 °F) Fumes evolved by overheating during improperly processing or by burning may be injurious to health.
Softening Point:	150 - 160 °C (302 - 320 °F)
Viscosity, Dynamic:	not applicable

## 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.

## TOXICOLOGICAL INFORMATION

Toxicity data for Makrolon Lumen XT cool-low DF LC3, texture  
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)



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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: noel: 1,000 mg/kg, (rat, )
Mutagenicity:	Genetic toxicity in vitro: Ames: negative results were reported in various in vitro studies. (Salmonella typhimurium)

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## ECOLOGICAL INFORMATION

Ecological Data for MAKROLON LUMEN XT COOL-LOW DF LC3, TEXTURE

Additional Ecotoxicological Remarks

No data available for this product.

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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: IC50: > 2 mg/l, (other: algae)

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

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## DISPOSABLE CONSIDERATIONS

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



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## TRANSPORTATION INFORMATION

Land Transport (DOT): Non-Regulated

Sea Transport (IMDG): Non-Regulated

Air Transport (ICAO/IATA): Non-Regulated

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## REGULATORY INFORMATION

United States Federal Regulations

OSHA Hazcom Standard Rating: Non-Hazardous

US. Toxic Substances Control Act: Excluded: Article.

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.

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### 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.



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

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 Extraordinary 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

## 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 Bayer MaterialScience LLC is comprised of Product Labels and Material Safety Data Sheets. HMIS and NFPA ratings are provided by Bayer MaterialScience LLC as a customer service.

Contact Person:	Product Safety Department
Telephone:	(412) 777-2835
MSDS Number:	112000031886
Version Date:	10/04/2012
Report Version:	1.19

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