

MATERIAL SAFETY DATA SHEET



Bayer MaterialScience

Bayer MaterialScience LLC
Product Safety & Regulatory Affairs
100 Bayer Road
Pittsburgh, PA 15205-9741
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 HYGARD BR BULLET RESI CLEAR-A00,
SMOOTH / SMOOTH
Material Number: 58099701
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 HYGARD BR BULLET RESI CLEAR-A00, SMOOTH / SMOOTH
Contact with heated material can cause thermal burns.

Ingestion

Acute Ingestion

For Product: MAKROLON HYGARD BR BULLET RESI CLEAR-A00, SMOOTH / SMOOTH
Ingestion is not a typical route of industrial exposure.

General Effects of Exposure

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Acute Effects of Exposure**For Product:** MAKROLON HYGARD BR BULLET RESI CLEAR-A00, SMOOTH / SMOOTH

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 BR BULLET RESI CLEAR-A00, SMOOTH / SMOOTH

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. Firefighting 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**

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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
Auto-ignition 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/m ³

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 HYGARD BR BULLET RESI CLEAR-A00, SMOOTH / SMOOTH

Toxicity Note

No data available for this product.

Toxicity Data for Polymethylmethacrylate

Acute oral toxicity

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

Acute inhalation toxicity

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

Acute dermal toxicity

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

Mutagenicity

Genetic Toxicity in Vitro:

Micronucleus test: positive (human lymphocytes)

12. Ecological information

Ecological Data for MAKROLON HYGARD BR BULLET RESI CLEAR-A00, SMOOTH / SMOOTH

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Additional Ecotoxicological Remarks

No data available for this product.

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.

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

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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 percent</u>	<u>Components</u>	<u>CAS-No.</u>
>=1%	Bisphenol A Polycarbonate	25971-63-5
>=1%	Polymethylmethacrylate	9011-14-7
>=1%	Polyurethane polyether elastomer	CAS# is a trade secret

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

<u>Weight percent</u>	<u>Components</u>	<u>CAS-No.</u>
0.1 - 1%	2-Propenoic acid, 2-methyl-, methyl ester	80-62-6
0.1 - 1%	Propylene Glycol Methyl Ether	107-98-2

MA Right to Know Extraordinarily Hazardous Substance List:

<u>Weight percent</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 percent</u>	<u>Components</u>	<u>CAS-No.</u>
<=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 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: 112000028900
 Version Date: 03/23/2013
 Report version: 1.12

This information is furnished without warranty, express or implied. This information is believed to be accurate to the best knowledge of Bayer MaterialScience LLC. The information in this MSDS relates only

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to the specific material designated herein. Bayer MaterialScience LLC assumes no legal responsibility for use of or reliance upon the information in this MSDS.