

SAFETY DATA SHEET



Bayer MaterialScience

Bayer MaterialScience LLC
Product Safety & Regulatory Affairs
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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. Identification

Product Name: MAKROLON AR2 ABRASION RES CLEAR-A00, SMOOTH / SMOOTH
Material Number: 84344916
Chemical Family: Thermoplastic Polymer Sheet
Chemical Name: Bisphenol A Polycarbonate
Use: For the production of plastic sheet products

2. Hazards Identification

GHS Classification

This product is not hazardous in the form in which it is shipped by the manufacturer.

GHS Label Elements

Signal word: Warning

Hazard statements: If fine particles are generated during further processing, handling or by other means, product may form combustible dust concentrations in air.

3. Composition/Information on Ingredients

Hazardous Components

There are no hazardous components above the relevant concentration limits according to OSHA HazCom 2012.

4. First Aid Measures

Most Important Symptom(s)/Effect(s)

Acute: Contact with heated material can cause thermal burns., Gases and fumes evolved during the thermal processing or decomposition of this material may irritate the eyes, skin or respiratory tract.

Eye Contact

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

Material Name: MAKROLON AR2 ABRASION RES CLEAR-A00, SMOOTH / SMOOTH

Material Number: 84344916

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), Foam

Unsuitable Extinguishing Media: High Pressure Water Streams

Fire Fighting Procedure

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

Hazardous Decomposition Products

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

Unusual Fire/Explosion Hazards

Toxic and irritating gases/fumes may be given off during burning or thermal decomposition. Avoid generating dust: fine dust dispersed in air in sufficient concentrations and in the presence of an ignition source is a potential dust explosion hazard.

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. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture as they are released into the atmosphere in sufficient concentrations. Avoid dispersal of dust in the air (e.g., cleaning dust from surfaces with compressed air).

7. Handling and Storage**Handling/Storage Precautions**

Handle in accordance with good industrial hygiene and safety practices. Wash thoroughly after handling. Minimize dust generation and accumulation. Routine housekeeping should be instituted to ensure that dust does not accumulate on surfaces. Solid particulate can generate electrical charging during operations such as unloading from containers and pneumatic transfer. Provide adequate precautions, such as electrical grounding and bonding, where conductive equipment is involved.

Storage Period:

None.

Storage Temperature

Material Name: MAKROLON AR2 ABRASION RES CLEAR-A00, SMOOTH / SMOOTH

Material Number: 84344916

Maximum: 49 °C (120.2 °F)

Storage Conditions

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

Substances to Avoid

None known.

8. Exposure Controls/Personal Protection

Isopropanol (67-63-0)

US. ACGIH Threshold Limit Values

Time Weighted Average (TWA): 200 ppm

US. ACGIH Threshold Limit Values

Short Term Exposure Limit (STEL): 400 ppm

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Permissible exposure limit: 400 ppm, 980 mg/m³

US. ACGIH Threshold Limit Values

Hazard Designation: Group A4 Not classifiable as a human carcinogen.

Methanol (67-56-1)

US. ACGIH Threshold Limit Values

Time Weighted Average (TWA): 200 ppm

US. ACGIH Threshold Limit Values

Short Term Exposure Limit (STEL): 250 ppm

US. ACGIH Threshold Limit Values

Skin designation: Can be absorbed through the skin.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Permissible exposure limit: 200 ppm, 260 mg/m³

1-Butanol (71-36-3)

US. ACGIH Threshold Limit Values

Time Weighted Average (TWA): 20 ppm

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Permissible exposure limit: 100 ppm, 300 mg/m³

Propylene Glycol Methyl Ether (107-98-2)

US. ACGIH Threshold Limit Values

Time Weighted Average (TWA): 50 ppm

US. ACGIH Threshold Limit Values

Short Term Exposure Limit (STEL): 100 ppm

US. ACGIH Threshold Limit Values

Hazard Designation: Group A4 Not classifiable as a human carcinogen.

Material Name: MAKROLON AR2 ABRASION RES CLEAR-
A00, SMOOTH / SMOOTH

Material Number: 84344916

Any component which is listed in section 3 and is not listed in this section does not have a known ACGIH TLV, OSHA PEL or supplier recommended occupational exposure limit.

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/m³ - total dust, 5 mg/m³ - respirable fraction is recommended. In addition, the ACGIH recommends 3 mg/m³ - respirable particles and 10 mg/m³ - 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 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

State of Matter:	solid
Appearance:	Sheet
Color:	Clear
Odor:	Odorless
Odor Threshold:	No Data Available
pH:	No Data Available
Melting Point:	220 - 230 °C (428 - 446 °F)
Boiling Point:	No Data Available
Flash Point:	No Data Available
Evaporation Rate:	No Data Available
Flammability:	No Data Available
Lower explosion limit:	No Data Available
Upper Explosion Limit:	No Data Available
Vapor Pressure:	No Data Available
Vapor Density:	No Data Available
Density:	ca. 1.2 g/cm ³ @ 20 °C (68 °F) (DIN 53479)
Relative Vapor Density:	No Data Available
Specific Gravity:	No Data Available
Solubility in Water:	insoluble
Partition Coefficient: n-octanol/water:	No Data Available
Auto-ignition Temperature:	> 450 °C (842 °F)
Decomposition Temperature:	>= 380 °C (716 °F)

Material Name: MAKROLON AR2 ABRASION RES CLEAR-A00, SMOOTH / SMOOTH

Material Number: 84344916

Softening point: Fumes evolved by overheating during improperly processing or by burning may be injurious to health.
Dynamic Viscosity: 150 - 160 °C (302 - 320 °F)
Kinematic Viscosity: not applicable
No Data Available

10. Stability and Reactivity

Hazardous Reactions

Hazardous polymerisation does not occur.

Stability

Stable

Materials to Avoid

None known.

Conditions to Avoid

Generation of dust clouds.

Hazardous Decomposition Products

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

11. Toxicological Information

Likely Routes of Exposure:

Inhalation
Skin Contact
Eye Contact

Health Effects and Symptoms

Acute: Contact with heated material can cause thermal burns., Gases and fumes evolved during the thermal processing or decomposition of this material may irritate the eyes, skin or respiratory tract.

Toxicity Data for MAKROLON AR2 ABRASION RES CLEAR-A00, SMOOTH / SMOOTH

No data available for this product.

Carcinogenicity:

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

12. Ecological Information

No data available for this product.

The components in this product are either non-hazardous or do not have any ecotoxicity data associated with them.

13. Disposal Considerations

Waste Disposal Method

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Material Number: 84344916

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

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.

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

Massachusetts Right to Know Extraordinarily Hazardous Substance List:

Material Name: MAKROLON AR2 ABRASION RES CLEAR-A00, SMOOTH / SMOOTH

Material Number: 84344916

<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. Developmental toxin. Female reproductive toxin. Male reproductive toxin.

<u>Weight percent</u>	<u>Components</u>	<u>CAS-No.</u>
<1 ppt	Mercury	7439-97-6
<1 ppt	Cadmium	7440-43-9
<1 ppt	Arsenic	7440-38-2
5 - 10 ppt	Lead	7439-92-1
0.154%	Methanol	67-56-1
<=3 ppm	Methylene Chloride	75-09-2

Based on information provided by our suppliers, this product is considered "DRC Conflict Free" as defined by the SEC Conflict Minerals Final Rule (Release No. 34-67716; File No. S7-40-10; Date: 2012-08-22).

16. Other Information

The method of hazard communication for Bayer MaterialScience LLC is comprised of Product Labels and Safety Data Sheets.

Contact: Product Safety Department
 Telephone: (412) 777-2835
 SDS Number: 112000050627
 Version Date: 03/05/2015
 SDS Version: 1.0

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