

MATERIAL SAFETY DATA SHEET



Bayer MaterialScience

Bayer MaterialScience LLC
Product Safety & Regulatory Affairs
100 Bayer Road
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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 AR2 ABRASION RES BRONZE-K09, SMOOTH / SMOOTH
Material Number: 58092367
Chemical Family: Thermoplastic Polymer Sheet
Chemical Name: Bisphenol A Polycarbonate

2. Hazards Identification

Emergency Overview

Caution: **Color:** Bronze **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 AR2 ABRASION RES BRONZE-K09, SMOOTH / SMOOTH
Contact with heated material can cause thermal burns.

Eye

Acute Eye

For Product: MAKROLON AR2 ABRASION RES BRONZE-K09, SMOOTH / SMOOTH
May cause mechanical irritation.

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Ingestion

Acute Ingestion

For Product: MAKROLON AR2 ABRASION RES BRONZE-K09, SMOOTH / SMOOTH

Ingestion is not a typical route of industrial exposure.

General Effects of Exposure

Acute Effects of Exposure

For Product: MAKROLON AR2 ABRASION RES BRONZE-K09, 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 AR2 ABRASION RES BRONZE-K09, 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. 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. 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

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 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:	Bronze
Odor:	Odorless
pH:	not applicable
Melting Point:	220 - 230 °C (428 - 446 °F)
Density:	ca. 1.2 g/cm ³ @ 20 °C (68 °F) (DIN 53479)
Solubility in Water:	insoluble
Auto-ignition 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

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 AR2 ABRASION RES BRONZE-K09, SMOOTH / SMOOTH

Toxicity Note

No data available for this product.

12. Ecological information

Ecological Data for MAKROLON AR2 ABRASION RES BRONZE-K09, SMOOTH / SMOOTH

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: 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.

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Article Number: 58092367

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%	Bisphenol A Polycarbonate	CAS# is a trade secret

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. - 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
1540 ppm	Methanol	67-56-1
<1 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: 112000049418
Version Date: 01/27/2013
Report version: 1.1

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