



SAFETY DATA SHEET

according to Regulation (EU) No. 1907/2006

112000023189

Version 1.1

Revision Date 20.04.2009

Print Date 21.04.2009

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product information

Trade name : **MAKROLON 2407**
Use : Production of moulded plastic articles

Company

Bayer MaterialScience AG
BMS-IO-HSEQ-PSI (Product Safety)
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Responsible Care Group, Newbury RG14 1JA, UK)

2. HAZARDS IDENTIFICATION

Not a product dangerous for health or the environment according to the definition of EC Directives 2006/121/EC or 1999/45/EC and their valid adaptations and derived national regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Polycarbonate based on bisphenol A

4. FIRST AID MEASURES

In case of skin contact: CONTACT WITH THE HOT MELT: Cool immediately with plenty of water. Do not remove product crusts which may have formed neither forcibly nor by applying any solvents to the skin involved. To obtain treatment for possible burns, and appropriate skin care, seek medical advice immediately.

The following information refers to the handling of the product at room temperature. In case of skin contact wash affected areas thoroughly with soap and plenty of water.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: sprayed water jet, extinguishing powder, Carbon dioxide (CO₂), Foam, Dry chemical



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Burning releases carbon monoxide, carbon dioxide, oxides of nitrogen and traces of hydrogen cyanide. In the event of fire and/or explosion do not breathe fumes.

Firemen must wear self-contained breathing apparatus.

Do not allow contaminated extinguishing water to enter the soil, ground-water or surface waters.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: slip hazard!

Methods for cleaning up: Use mechanical handling equipment. Avoid dust formation.

Additional advice: For further disposal measures see chapter 13.

7. HANDLING AND STORAGE**Handling**

Under recommended processing conditions small amounts of residues of monomers and residual solvent may be emitted. Provided good ventilation and/or local exhaust systems are used, the Workplace Exposure Limit(s) stated in Chapter 8 should not be exceeded.

Dust must be removed by effective exhaust ventilation.

Storage

No special storage conditions required.

VCI storage class (VCI = German Association of the Chemical Industry): 11

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

The regulations for the substances listed below must be observed when processing this product, particularly if processing takes place at elevated temperatures. In our experience the provision of effective fresh-air and exhaust ventilation equipment at the points where vapors may be generated will ensure compliance with the tolerance limits quoted below.

UK Workplace Exposure Limits (WEL), per EH40 document (Health & Safety Executive). If no UK value exists, EU exposure limits given where available.

Substance	CAS-No.	Basis	Type	Value	Ceiling Limit Value	Remarks
phenol	108-95-2	EH40 WEL	TWA	2 ppm		Dermal absorption possible

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phenol	108-95-2	EU ELV	TWA	2 ppm 7.8 mg/m ³		Dermal absorption possible
chlorobenzene	108-90-7	EH40 WEL	TWA	1 ppm		Dermal absorption possible
chlorobenzene	108-90-7	EH40 WEL	STEL	3 ppm		
chlorobenzene	108-90-7	EU ELV	TWA	5 ppm 23 mg/m ³		
chlorobenzene	108-90-7	EU ELV	STEL	15 ppm 70 mg/m ³		
General limiting value of dust		EH40 WEL	TWA	10 mg/m ³		inhalable fraction
General limiting value of dust		EH40 WEL	TWA	4 mg/m ³		alveolar fraction

Respiratory protection:

In case of dust formation use respiratory equipment with filter type particle filter P1 according to EN 143.

Hand protection:

Suitable materials for safety gloves; EN 374-3:

Polyvinyl chloride - PVC (≥ 0.5 mm)

Contaminated and/or damaged gloves must be changed.

Eye protection:

Wear eye/face protection.

Skin and body protection:

Wear suitable protective clothing.

Hygiene measures:

Keep away from foodstuffs, drinks and tobacco. Wash hands before breaks and at end of work and use skin-protecting ointment. Change contaminated clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Colour:	different according to colouration
Form:	granular
Odour:	odourless
Softening point:	> 130 - 160 °C
Decomposition temperature:	≥ 380 °C
Density:	ca. 1.2 - 1.4 g/cm ³
Bulk density:	600 - 700 kg/m ³
Vapour pressure:	not applicable
Viscosity, dynamic:	not applicable
Water solubility:	practically insoluble
pH:	not applicable
Ignition temperature:	> 450 °C
Autoignition temperature:	not applicable



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Explosion limits: not applicable

10. STABILITY AND REACTIVITY

Hazardous reactions: No hazardous reactions observed.

Hazardous decomposition products: Caused by smouldering and incomplete combustion toxic fumes mainly consisting of CO and CO₂ may be developed.

Thermal decomposition: Fumes evolved by overheating during improperly processing or by burning may be injurious to health.

11. TOXICOLOGICAL INFORMATION

Under recommended processing conditions small amounts of emissions may occur.

The regulations for the substances listed below must be observed when processing this product, particularly if processing takes place at elevated temperatures.

Substance	CAS-No.	R-phrase(s)
phenol	108-95-2	R68 Possible risk of irreversible effects. R23/24/25 Toxic by inhalation, in contact with skin and if swallowed. R48/20/21/22 Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed. R34 Causes burns.
chlorobenzene	108-90-7	R20 Harmful by inhalation.
4-tert-butylphenol	98-54-4	R36/37/38 Irritating to eyes, respiratory system and skin.
bisphenol A; 4,4'-isopropylidenediphenol	80-05-7	R62 Possible risk of impaired fertility. R37 Irritating to respiratory system. R41 Risk of serious damage to eyes. R43 May cause sensitization by skin contact.

Additional information:

According to our experience and information the product has no harmful effects on health if properly handled.

12. ECOLOGICAL INFORMATION

Do not allow to escape into waterways, wastewater or soil.

Additional information on ecotoxicology:

The product is practically insoluble in water. In view of its consistency and insolubility in water,

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no ecological problems are to be expected if the product is properly handled. The product is not readily biodegradable.

13. DISPOSAL CONSIDERATIONS

Dispose in accordance with applicable international, national and local laws, ordinances and statutes.

For disposal within the EC, the appropriate code according to the European Waste Catalogue (EWC) should be used.

After containers have been emptied as thoroughly as possible (e.g. by pouring, scraping or draining until "drip-dry"), they can be sent to an appropriate collection point set up within the framework of the existing take-back scheme of the chemical industry. Containers must be recycled in compliance with national legislation and environmental regulations.

The product is suitable for mechanical recycling. After appropriate treatment it can be remelted and reprocessed into new moulded articles. Mechanical recycling is only possible if the material has been selectively retrieved and carefully segregated according to type.

14. TRANSPORT INFORMATION**ADR/RID** - -**ADNR** - -**IATA** - -**IMDG** - -

Other information : Not dangerous cargo.
Keep dry.

15. REGULATORY INFORMATION

No labelling is required for this material by the Chemicals (Hazard Information and Packaging for Supply) Regulations 2002 (CHIP3), in accordance with EC Directives.

National legislation

Water contaminating class (Germany): nw not water endangering
(in accordance with Annex 1 to the Directive on Water-Hazardous Substances)



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16. OTHER INFORMATION

Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.