

Safety Data Sheet

ULTRADUR® B 4406 G4 UNCOLORED POLYBUTYLENE TEREPHTHALATE

Revision date : 2014/03/28
Version: 2.1

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(30036545/SDS_GEN_US/EN)

1. Identification

Product identifier used on the label

ULTRADUR® B 4406 G4 UNCOLORED POLYBUTYLENE TEREPHTHALATE

Recommended use of the chemical and restriction on use

Recommended use: Polymer for industrial processing only
Suitable for use in industrial sector: Polymers industry;

* The "Recommended use" identified for this product is provided solely to comply with a US Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

Company:

BASF CORPORATION
100 Park Avenue
Florham Park, NJ 07932, USA

Telephone: +1 973 245-6000

Emergency telephone number

CHEMTREC: 1-800-424-9300
BASF HOTLINE: 1-800-832-HELP (4357)

Other means of identification

Molecular formula: (C₁₂H₁₂O₄)_n
Synonyms: Poly(butylene terephthalate)

2. Hazards Identification

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Classification of the product

No need for classification according to GHS criteria for this product.

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Label elements (Emergency overview)

The product does not require a hazard warning label in accordance with GHS criteria.

Hazards not otherwise classified

No specific dangers known, if the regulations/notes for storage and handling are considered.

Emergency overview

According to Regulation 1994 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

CAUTION:

MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION.
INGESTION MAY CAUSE GASTRIC DISTURBANCES.

Use with local exhaust ventilation.

Wear a NIOSH-certified (or equivalent) particulate respirator.

Wear NIOSH-certified chemical goggles.

Wear protective clothing.

Eye wash fountains and safety showers must be easily accessible.

3. Composition / Information on Ingredients

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

<u>CAS Number</u>	<u>Content (W/W)</u>	<u>Chemical name</u>
1309-64-4	>= 5.0 - < 7.0 %	diantimony trioxide
65997-17-3	>= 20.0 - <= 25.0 %	Glass, oxide, chemicals

According to Regulation 1994 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

<u>CAS Number</u>	<u>Content (W/W)</u>	<u>Chemical name</u>
65997-17-3	>= 15.0 - <= 30.0 %	Glass, oxide, chemicals
1309-64-4	>= 3.0 - <= 7.0 %	diantimony trioxide

4. First-Aid Measures

Description of first aid measures

General advice:

Remove contaminated clothing.

If inhaled:

Remove the affected individual into fresh air and keep the person calm. Assist in breathing if necessary. Consult a physician.

If on skin:

Burns caused by molten material require hospital treatment.

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If in eyes:

If irritation develops, seek medical attention. In case of contact with the eyes, rinse immediately for at least 15 minutes with plenty of water.

If swallowed:

Ingestion is not likely in the available physical form. If ingested, seek medical attention. Consult a physician.

Most important symptoms and effects, both acute and delayed

Symptoms: No significant reaction of the human body to the product known.

Hazards: No hazard is expected under intended use and appropriate handling.

Indication of any immediate medical attention and special treatment needed

Note to physician

Treatment: Treat symptomatically.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:
water spray, foam, dry powder

Special hazards arising from the substance or mixture

Hazards during fire-fighting:

carbon monoxide, tetrahydrofuran, hydrogen halides, brominated dibenzodioxins can be emitted at > 290 °C

Under special fire conditions traces of other toxic substances are possible. Formation of further decomposition and oxidation products depends upon the fire conditions.

Advice for fire-fighters

Protective equipment for fire-fighting:

Wear a self-contained breathing apparatus.

Further information:

Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

6. Accidental release measures

Further accidental release measures:

High risk of slipping due to leakage/spillage of product.

Personal precautions, protective equipment and emergency procedures

No special precautions necessary.

Environmental precautions

No special precautions necessary.

Methods and material for containment and cleaning up

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For small amounts: Pick up with suitable appliance and dispose of.
For large amounts: Pick up with suitable appliance and dispose of.

7. Handling and Storage

Precautions for safe handling

Avoid dust formation.

Exhaust ventilation at processing machines is required during thermal processing and/or machining. However, if dust formulation occurs at processing / finishing processing steps like regranulation, mechanical machining (for example drilling, grinding etc.) provide suitable exhaust ventilation.

Cleaning of product-contaminated machine parts with open flames should be avoided. If task are carried out with open flames, ventilation measures are mandatory.

Protection against fire and explosion:
Take precautionary measures against static discharges.

Conditions for safe storage, including any incompatibilities

Suitable materials for containers: Low density polyethylene (LDPE), High density polyethylene (HDPE), Stainless steel, aluminum

Further information on storage conditions: Keep container tightly closed. Avoid deposition of dust. Protect against moisture.

Storage stability:
Protect against moisture.

8. Exposure Controls/Personal Protection

Components with occupational exposure limits

diantimony trioxide	OSHA PEL ACGIH TLV	PEL 0.5 mg/m3 (antimony (Sb)); TWA value 0.5 mg/m3 (antimony (Sb)); ; Included in the regulation, but with no data values - See the regulation for further details ; Exposure by all routes should be carefully controlled to levels as low as possible.
Glass, oxide, chemicals	ACGIH TLV	TWA value 5 mg/m3 Inhalable fraction ; TWA value 1 fibers/cm ³ Fiber ; Respirable fibers: length > 5 micrometers; aspect ration >= 3:1, as determined by the membrane filter method at 400-450X magnification (4-mm objective), using phase-contrast illumination.

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Advice on system design:

Ensure adequate ventilation.

Personal protective equipment

Respiratory protection:

Wear respiratory protection if ventilation is inadequate. Wear a NIOSH-certified (or equivalent) particulate respirator.

Hand protection:

Wear gloves to prevent contact during mechanical processing and/or hot melt conditions.

Eye protection:

Tightly fitting safety goggles (chemical goggles).

General safety and hygiene measures:

Wear protective clothing to prevent contact during mechanical processing and/or hot melt conditions. Avoid inhalation of dust. Wash soiled clothing immediately.

9. Physical and Chemical Properties

Form:	pellets	
Odour:	odourless	
Odour threshold:	No data available.	
Colour:	various, depending on the colourant	
pH value:		not applicable
melting range:	220 - 230 °C	(DIN 53736)
Boiling range:		The substance / product decomposes therefore not determined.
Sublimation point:		No applicable information available.
Flash point:		not applicable
Flammability:	not self-igniting	
Flammability of Aerosol Products:		not applicable, the product does not form flammable aerosoles)
Lower explosion limit:		The substance / product decomposes therefore not determined.
Autoignition:	> 350 °C	(ASTM D1929)
Vapour pressure:		not applicable
Density:	1.60 - 1.70 g/cm ³	(20 °C) (EN ISO 1183-1)
Relative density:		No data available.
Bulk density:	600 - 900 kg/m ³	
Vapour density:		not applicable
Partitioning coefficient n-octanol/water (log Pow):		not applicable
Self-ignition temperature:		not self-igniting
Thermal decomposition:	> 290 °C	To avoid thermal decomposition, do not overheat.
Viscosity, kinematic:		not applicable, the product is a solid
Solubility in water:		insoluble

10. Stability and Reactivity

Reactivity

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Additional information:

No hazardous reactions if stored and handled as prescribed/indicated.

Chemical stability

The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions

Hazardous reactions:

The product is chemically stable.

No hazardous reactions known.

Conditions to avoid

Conditions to avoid:

Temperature: > 290 degrees Celsius

Incompatible materials

Substances to avoid:

No substances known that should be avoided.

Hazardous decomposition products

Decomposition products:

Hazardous decomposition products: carbon monoxide, tetrahydrofuran, terephthalic acid, carbon dioxide, Water, Danger by forming of toxic pyrolytic products.

Thermal decomposition:

> 290 °C

To avoid thermal decomposition, do not overheat.

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity

Assessment of acute toxicity:

Contact with molten product may cause thermal burns. The resin in pelleted form poses a low hazard.

Oral

Type of value: ATE

Value: > 5,000 mg/kg

Inhalation

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Not inhalable due to the physico-chemical properties of the product.

Dermal

Type of value: ATE
Value: > 5,000 mg/kg

Irritation / corrosion

Assessment of irritating effects:
Thermal decomposition products of the substance can irritate the eyes, skin, and respiratory tract.

Information on: diantimony trioxide

Assessment of irritating effects:

Skin contact causes irritation. May cause severe damage to the eyes.

Information on: Glass, oxide, chemicals

Assessment of irritating effects:

Skin contact causes irritation. EU-classification Not irritating to the eyes.

Sensitization

Assessment of sensitization:

Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

Information on: diantimony trioxide

Assessment of sensitization:

Skin sensitizing effects were not observed in animal studies. The substance did not cause skin sensitization in humans.

Aspiration Hazard

May be harmful if swallowed and enters airways.

Chronic Toxicity/Effects

Repeated dose toxicity

Information on: diantimony trioxide

Assessment of repeated dose toxicity:

Repeated oral uptake of the substance did not cause substance-related effects. The substance may cause damage to the lung even after repeated inhalation of low doses, as shown in animal studies.

Genetic toxicity

Assessment of mutagenicity: Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

Carcinogenicity

Information on: diantimony trioxide

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*Assessment of carcinogenicity: Indication of possible carcinogenic effect in animal tests. IARC (International Agency for Research on Cancer) has classified this substance as group 2B (The agent is possibly carcinogenic to humans).
IARC (International Agency for Research on Cancer) has classified this substance as group 2B (The agent is possibly carcinogenic to humans).*

Other Information

Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

Symptoms of Exposure

No significant reaction of the human body to the product known.

12. Ecological Information

Toxicity

Aquatic toxicity

Assessment of aquatic toxicity:

The product has not been tested. The statement has been derived from the structure of the product. There is a high probability that the product is not acutely harmful to aquatic organisms.

Persistence and degradability

Assessment biodegradation and elimination (H₂O)

Experience shows this product to be inert and non-degradable.

The product is virtually insoluble in water and can thus be separated from water mechanically in suitable effluent treatment plants.

Bioaccumulative potential

Bioaccumulation potential

The product will not be readily bioavailable due to its consistency and insolubility in water.

13. Disposal considerations

Waste disposal of substance:

Check for possible recycling. Observe national and local legal requirements. Dispose of as hazardous waste in compliance with national waste legislation requirements and local regulations.

Container disposal:

Packs must be completely emptied. Completely emptied packagings can be given for recycling.

14. Transport Information

Land transport

USDOT

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Not classified as a dangerous good under transport regulations

Sea transport IMDG

Not classified as a dangerous good under transport regulations

Air transport IATA/ICAO

Not classified as a dangerous good under transport regulations

15. Regulatory Information

Federal Regulations

Registration status:

Chemical TSCA, US released / listed

EPCRA 311/312 (Hazard categories): Not hazardous;

EPCRA 313:

<u>CAS Number</u>	<u>Chemical name</u>
1309-64-4	diantimony trioxide

State regulations

State RTK

MA, NJ, PA

CAS Number

65997-17-3

Chemical name

Glass, oxide, chemicals

CA Prop. 65:

THIS PRODUCT CONTAINS A CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER.

NFPA Hazard codes:

Health : 1 Fire: 1 Reactivity: 0 Special:

HMIS III rating

Health: 1 Flammability: 1 Physical hazard: 0

16. Other Information

SDS Prepared by:

BASF NA Product Regulations

SDS Prepared on: 2014/03/28

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operations on society and the environment during production, storage, transport, use and disposal of our products.

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