1. Identification

Product identifier used on the label

ULTRADUR® B 4406 G4 BLACK 07110
POLYBUTYLENE TEREPHTHALATE

Recommended use of the chemical and restriction on use

Recommended use*: Polymer
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 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
Chemical family: Polymer
Synonyms: Poly(butylene terephthalate)
Ultradur

2. Hazards Identification


Classification of the product
No need for classification according to GHS criteria for this product.

Label elements

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.

3. Composition / Information on Ingredients


<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Weight %</th>
<th>Chemical name</th>
</tr>
</thead>
<tbody>
<tr>
<td>102-09-0</td>
<td>&gt;= 0.0 - &lt; 0.2%</td>
<td>Carbonic acid, diphenyl ester</td>
</tr>
<tr>
<td>1309-64-4</td>
<td>&gt;= 5.0 - &lt; 7.0%</td>
<td>Diantimony trioxide</td>
</tr>
<tr>
<td>1333-86-4</td>
<td>&gt;= 1.0 - &lt; 3.0%</td>
<td>Carbon black</td>
</tr>
</tbody>
</table>

4. First-Aid Measures

Description of first aid measures

General advice:
Avoid contact with the skin, eyes and clothing. Remove contaminated clothing.

If inhaled:
If difficulties occur after dust has been inhaled, remove to fresh air and seek medical attention.

If on skin:
Burns caused by molten material require hospital treatment.

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

If swallowed:
Rinse mouth and then drink 200-300 ml of water. Ingestion is not likely in the available physical form. If ingested, seek medical attention. Do not induce vomiting.

Most important symptoms and effects, both acute and delayed

Symptoms: (Further) symptoms and/or effects are not known so far
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 according to symptoms (decontamination, vital functions), no known specific antidote.
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
Formation of further decomposition and oxidation products depends upon the fire conditions. Under special fire conditions traces of other toxic substances are possible.

Advice for fire-fighters
Protective equipment for fire-fighting:
Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

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
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**
No applicable information available.

Suitable materials for containers: Low density polyethylene (LDPE), High density polyethylene (HDPE), Aluminium, Carbon steel (Iron)

Further information on storage conditions: Keep container tightly closed and dry; store in a cool place. Avoid dust formation, product dust can form an explosive mixture with air.

Storage stability:
Protect against moisture.

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**8. Exposure Controls/Personal Protection**

**Components with occupational exposure limits**

<table>
<thead>
<tr>
<th>Component</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diantimony trioxide</td>
<td>PEL 0.5 mg/m³ (antimony (Sb)); TWA value 0.5 mg/m³ (antimony (Sb));</td>
<td>TWA value 0.5 mg/m³ (antimony (Sb)); Included in the regulation, but with no data values - See the regulation for further details</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Exposure by all routes should be carefully controlled to levels as low as possible.</td>
</tr>
<tr>
<td>Carbon black</td>
<td>PEL 3.5 mg/m³ ; TWA value 3.5 mg/m³ ;</td>
<td>TWA value 3 mg/m³ Inhalable fraction ;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glass, oxide, chemicals</td>
<td></td>
<td>TWA value 5 mg/m³ Inhalable fraction ; TWA value 0.2 fibers/cm³ Fiber ; TWA value 1 fibers/cm³ Fiber ;</td>
</tr>
</tbody>
</table>

**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) organic vapour/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).

**Body protection:**
Body protection must be chosen based on level of activity and exposure.
General safety and hygiene measures:
Wear protective clothing to prevent contact during mechanical processing and/or hot melt conditions. The product contains dangerous ingredients (see paragraph 2, SDS), which are embedded in plastic and are only set free when milled. Avoid inhalation of dusts/mists/vapours. When using do not eat or drink. Hands and/or face should be washed before breaks and at the end of the shift. Wash soiled clothing immediately.

9. Physical and Chemical Properties

Form: pellets
Odour: odourless
Odour threshold: not applicable
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 (derived from flash point)
Flammability of Aerosol Products: not applicable, the product does not form flammable aerosoles
Lower explosion limit: For solids not relevant for classification and labelling.
Upper explosion limit: For solids not relevant for classification and labelling.
Autoignition: > 350 °C (ASTM D1929)
Vapour pressure: not applicable
Density: 1.60 - 1.70 g/cm3 (20 °C) (EN ISO 1183-1)
Relative density: Study does not need to be conducted.
Bulk density: 600 - 900 kg/m3 (DIN 53466)
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, dynamic: not applicable, the product is a solid
Viscosity, kinematic: not applicable, the product is a solid
Solubility in water: insoluble
Solubility (quantitative): No applicable information available.
Solubility (qualitative): No applicable information available.
Evaporation rate: The product is a non-volatile solid.

10. Stability and Reactivity

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

Oxidizing properties:
not fire-propagating
Chemical stability
The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions
The product is chemically stable.
No hazardous reactions known.

Conditions to avoid
Temperature: > 290 degrees Celsius

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

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

Assessment other acute effects
No applicable information available.

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: Not irritating to eyes and skin.

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**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.

**Aspiration Hazard**
May be harmful if swallowed and enters airways.

**Chronic Toxicity/Effects**

**Repeated dose toxicity**
Assessment of repeated dose toxicity: No applicable information available.

**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**
Assessment of carcinogenicity: No applicable information available.

*Information on: diantimony trioxide*
Assessment of carcinogenicity: IARC (International Agency for Research on Cancer) has classified this substance as group 2B (The agent is possibly carcinogenic to humans).

*Information on: carbon black*
Assessment of carcinogenicity: IARC (International Agency for Research on Cancer) has classified this substance as group 2B (The agent is possibly carcinogenic to humans). In long-term animal studies in which the substance was given by inhalation in high concentrations, a carcinogenic effect was observed. A clear indication of an increased risk of cancer in humans has so far not been shown. No carcinogenic potential can be deduced from other studies with rats and mice.

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**Reproductive toxicity**
Assessment of reproduction toxicity: No applicable information available.

**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**

(Further) symptoms and / or effects are not known so far

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**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
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): Refer to SDS section 2 for GHS hazard classes applicable for this product.

State regulations

<table>
<thead>
<tr>
<th>State RTK</th>
<th>CAS Number</th>
<th>Chemical name</th>
</tr>
</thead>
<tbody>
<tr>
<td>NJ</td>
<td>1333-86-4</td>
<td>carbon black</td>
</tr>
<tr>
<td></td>
<td>65997-17-3</td>
<td>Glass, oxide, chemicals</td>
</tr>
<tr>
<td>PA</td>
<td>1309-64-4</td>
<td>diantimony trioxide</td>
</tr>
<tr>
<td></td>
<td>1333-86-4</td>
<td>carbon black</td>
</tr>
<tr>
<td></td>
<td>65997-17-3</td>
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</tr>
</tbody>
</table>

Safe Drinking Water & Toxic Enforcement Act, CA Prop. 65:

WARNING: This product can expose you to chemicals including ARSENIC (INORGANIC ARSENIC COMPOUNDS), which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.

NFPA Hazard codes:

Health: 1  Flammability: 1  Reactivity: 0  Special: 0

HMIS III rating

Health: 1  Flammability: 1  Physical hazard: 0

16. Other Information

SDS Prepared by:
BASF NA Product Regulations
SDS Prepared on: 2019/08/21

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.