1. Identification

Product identifier used on the label

ULTRADUR® S 4090 G4 BLACK 15051 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 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
Chemical family: polyester resin
Synonyms: Poly(butylene terephthalate)

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>14807-96-6</td>
<td>&gt;= 0.1 - &lt; 0.3%</td>
<td>talc</td>
</tr>
<tr>
<td>1333-86-4</td>
<td>&gt;= 1.0 - &lt; 3.0%</td>
<td>carbon black</td>
</tr>
<tr>
<td>9004-36-8</td>
<td>&gt;= 10.0 - &lt; 15.0%</td>
<td>cellulose acetate butyrate</td>
</tr>
<tr>
<td>25038-59-9</td>
<td>&gt;= 7.0 - &lt; 15.0%</td>
<td>Polyethyleneterephthalate (PET)</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 plenty 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: 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, dry powder, foam

**Special hazards arising from the substance or mixture**

Hazards during fire-fighting:
- carbon monoxide, tetrahydrofuran, acrylonitrile, Styrene, alpha-Methylstyrene, n-butyl acrylate, can be emitted at > 300 °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:
- 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 inhalation of dusts/mists/vapours. Exhaust ventilation at processing machines is required during thermal processing and/or machining.
  - Protection against fire and explosion:
    - Take precautionary measures against static discharges.

- **Conditions for safe storage, including any incompatibilities**
  - The product in undamaged packing need not be stored separately.
  - 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. Avoid deposition of dust. Protect against moisture.

Storage stability:
Protect against moisture.

### 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>carbon black</td>
<td>PEL 3.5 mg/m3; TWA value 3.5 mg/m3;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TWA value 3 mg/m3 Inhalable fraction;</td>
<td></td>
</tr>
<tr>
<td>talc</td>
<td>OSHA PEL</td>
<td>TWA value 2 mg/m3 Respirable dust; TWA value 20 millions of particles per cubic foot of air; TWA value 2.4 millions of particles per cubic foot of air Respirable; The exposure limit is calculated from the equation, 250/(%SiO2+5), using a value of 100% SiO2. Lower percentages of SiO2 will yield higher exposure limits. TWA value 0.1 mg/m3 Respirable; The exposure limit is calculated from the equation, 10mg/m3)/(%SiO2+2), using a value of 100% SiO2. Lower percentages of SiO2 will yield higher exposure limits. TWA value 0.3 mg/m3 Total dust; The exposure limit is calculated from the equation, 30mg/m3)/(%SiO2+2), using a value of 100% SiO2. Lower percentages of SiO2 will yield higher exposure limits.</td>
</tr>
<tr>
<td></td>
<td>ACGIH TLV</td>
<td>TWA value 2 mg/m3 Respirable fraction; The value is for particulate matter containing no asbestos and &lt;1% crystalline silica.</td>
</tr>
<tr>
<td>Glass, oxide, chemicals</td>
<td>ACGIH TLV</td>
<td>TWA value 5 mg/m3 Inhalable fraction; TWA value 1 fibers/cm³ Fiber; Respirable fibers: length &gt; 5 micrometers; aspect ratio &gt;= 3:1, as determined by the membrane filter method at 400-450X magnification (4-mm objective), using phase-contrast illumination.</td>
</tr>
</tbody>
</table>

### Advice on system design:
Provide local exhaust ventilation to control dusts/mists.

### Personal protective equipment

#### Respiratory protection:
Wear a NIOSH-certified (or equivalent) particulate respirator. Wear respiratory protection if ventilation is inadequate. Do not exceed the maximum use concentration for the respirator facepiece/cartridge combination.
Hand protection:
Wear gloves to prevent contact during mechanical processing and/or hot melt conditions.

Eye protection:
Safety glasses with side-shields.

Body protection:
Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

General safety and hygiene measures:
Avoid inhalation of vapour. After use of gloves apply skin-cleaning agents and skin cosmetics.

9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>pellets</td>
</tr>
<tr>
<td>Odour</td>
<td>odourless</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>not applicable</td>
</tr>
<tr>
<td>Colour</td>
<td>various, depending on the colourant</td>
</tr>
<tr>
<td>pH value</td>
<td>not applicable</td>
</tr>
<tr>
<td>Melting range</td>
<td>220 - 225 °C (DIN EN ISO 3146)</td>
</tr>
<tr>
<td>Boiling range</td>
<td>The substance / product decomposes therefore not determined</td>
</tr>
<tr>
<td>Sublimation point</td>
<td>No applicable information available</td>
</tr>
<tr>
<td>Flash point</td>
<td>not applicable</td>
</tr>
<tr>
<td>Flammability</td>
<td>not self-igniting</td>
</tr>
<tr>
<td>Flammability of Aerosol Products</td>
<td>not applicable, the product does not form flammable aerosoles</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>For solids not relevant for classification and labelling</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>For solids not relevant for classification and labelling</td>
</tr>
<tr>
<td>Autoignition</td>
<td>&gt; 400 °C (ASTM D1929)</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>not applicable</td>
</tr>
<tr>
<td>Density</td>
<td>1.30 - 1.50 g/cm³ (20 °C) (EN ISO 1183-1)</td>
</tr>
<tr>
<td>Relative density</td>
<td>Study does not need to be conducted</td>
</tr>
<tr>
<td>Bulk density</td>
<td>600 - 900 kg/m³ (DIN 53466)</td>
</tr>
<tr>
<td>Vapour density</td>
<td>not applicable</td>
</tr>
<tr>
<td>Partitioning coefficient n-octanol/water (log Pow)</td>
<td>not applicable</td>
</tr>
<tr>
<td>Self-ignition</td>
<td>not self-igniting</td>
</tr>
<tr>
<td>Thermal decomposition</td>
<td>&gt; 300 °C</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>not applicable, the product is a solid</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>not applicable, the product is a solid</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>insoluble</td>
</tr>
<tr>
<td>Solubility (quantitative)</td>
<td>No applicable information available</td>
</tr>
<tr>
<td>Solubility (qualitative)</td>
<td>No applicable information available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>The product is a non-volatile solid</td>
</tr>
</tbody>
</table>
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: > 300 degrees Celsius

Incompatible materials
No substances known that should be avoided.

Hazardous decomposition products
Decomposition products:
Hazardous decomposition products: carbon monoxide, tetrahydrofuran, acrylonitrile, Styrene, alpha-Methylstyrene, Water, n-butyl acrylate, carbon dioxide

Thermal decomposition:
> 300 °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.

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.

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
No aspiration hazard expected.

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

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.

Information on: talc
Assessment of carcinogenicity: In long-term animal studies in which the substance was given by inhalation in high concentrations, a carcinogenic effect was observed.

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
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.

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13. Disposal considerations

**Waste disposal of substance:**
Check for possible recycling. Incinerate in suitable incineration plant, observing local authority regulations.

**Container disposal:**
Packs must be completely emptied. Completely emptied packagings can be given for recycling.

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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

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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

State regulations

CAS Number | Chemical name
--- | ---
1333-86-4 | carbon black
9003-54-7 | Styrene-acrylonitrile copolymer
65997-17-3 | Glass, oxide, chemicals
14807-96-6 | talc
1333-86-4 | carbon black
65997-17-3 | Glass, oxide, chemicals

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

WARNING: This product can expose you to chemicals including ACRYLONITRILE, which is known to the State of California to cause cancer. For more information, go to www.P65Warnings.ca.gov.

[Other Prop 65 components may be present in the product.]

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: 2017/11/01

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