

Material Safety Data Sheet

Carbon

SECTION 1: Hazards Identification

1.1 Classification of the substance or mixture

1.1.1 Directive 67/548/EEC & Directive 1999/45/EC

Not classified as dangerous for supply/use.

1.1.2 Regulation (EC) No. 1272/2008 (CLP)

Not classified as dangerous for supply/use.

1.2 Label elements

Not applicable.

1.3. Other hazards

Danger of burns while handling the heated or molten product.

SECTION 2: Composition/information on ingredients

Chemical nature:

Electrically conductive PETG copolyester, with milled carbon fibre reinforcement and proprietary additivation.

SECTION 3: First aid measures

3.1 If inhaled

After inhalation of decomposition products, bring the affected person to a source of fresh air and keep calm. Provide medical aid.

3.2 On skin contact

Areas affected by molten material should be quickly placed under cold running water. Burns caused by molten material require hospital treatment.

3.3 On contact with eyes

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

3.4 On ingestion

Rinse mouth and then drink plenty of water. If difficulties occur, seek medical attention.

3.5 Note to the physician

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

SECTION 4: Firefighting measures

4.1 Suitable extinguishing media

Dry extinguishing media, foam, water spray or fog.

4.2 Specific hazards

Carbon monoxide (CO), carbon dioxide (CO₂), aldehydes, and traces of aliphatic and aromatic hydrocarbons. The substances/groups of substances mentioned can be released at elevated temperatures (above 270 °C) and in case of fire.

4.3 Special protective equipment

Full protective clothing and self contained breathing apparatus.

4.4 Further information

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

SECTION 5: Accidental release measures

5.1 Personal precautions

Avoid inhalation. Sources of ignition should be kept well clear.

5.2 Environmental precautions

Prevent entry into drains.

5.3 Methods for cleaning up or taking up

Sweep/shovel up. Avoid raising dust. Ensure adequate ventilation.

5.4 Additional information

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

5.5 Reference to other sections

See also section 8 and 13.

SECTION 6: Handling and storage

6.1 Handling

Avoid contact with heated or molten product. Avoid dust formation. Dust can form an explosive mixture with air. Provide exhaust ventilation. Processing machines must be fitted with local exhaust ventilation. When the product is ground (chopped), dust explosion regulations should be noted.

6.2 Storage

Protect against moisture. Store material in dry rooms and always carefully seal again after portions of material have been withdrawn. Store at ambient temperatures. Avoid all source of ignition: heat, sparks, open flame.

6.3. Specific end use(s)

Primarily used for injection moulding plastic parts.

SECTION 7: Exposure controls/personal protection

7.1 Control parameters

7.1.1 Occupational Exposure Limits:

Given suitable ventilation, it can be assumed that the threshold limits will not be reached.

OSHA Hazard Communication Standard 29CFR 1910.1200 Dust (inhalable and respirable fraction):

PEL (OSHA)	15 mg/m ³ (8 hr.TWA) Total dust
PEL (OSHA)	5 mg/m ³ (8 hr. TWA) Respirable Dust
TLV (ACGIH)	10 mg/m ³ Inhalable particles
TLV (ACGIH)	3 mg/m ³ Respirable particles
TWA Respirable dust	5 mg/m ³ (MAC, NL, revision 2007)
TWA Inhalable dust	10 mg/m ³ (MAC, NL, revision 2007)

Carbon fibre (CAS nr. 308063-67-4 / 7440-44-0):

Long term exposure : 0.5 mg/m³, fibres/ml (respirable fibres)

7.2 Exposure controls

7.2.1 Appropriate engineering controls

Provide adequate ventilation.

7.2.2 Personal protective equipment

Respiratory protection (only when dust has formed):

Particle filter Type P1 or FFP1 (low efficiency for solid particles e.g. EN143, 149).

Hand protection:

Use additional heat protection gloves when handling hot molten product (e.g. of textile or leather).

Eye protection:

Safety glasses with side-shields (frame goggles) (EN 166).

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical protection suit (according to DIN-EN 465).

General safety and hygiene measures:

Avoid contact of molten material with skin. Avoid inhalation of dust/mists/vapours. Eye wash fountains and safety showers must be easily accessible. Handle in accordance with good industrial hygiene and safety practice.

7.2.3 Environmental exposure controls

Prevent entry into drains.

SECTION 8: Physical and chemical properties**8.1 Information on basic physical and chemical properties**

Form:	Granules
Colour:	Black.
Odour:	Odourless
Softening point:	> 100 °C
Auto-ignition temperature:	not specified
Density:	1.35 g/cm ³ (20°C, 1 bar)
Solubility in water:	Insoluble.

SECTION 9: Stability and reactivity**9.1 Conditions to avoid**

Avoid extreme heat. Avoid all sources of ignition: heat, sparks, open flame.

9.1.1 Thermal decomposition

Above 270°C. To avoid thermal decomposition, do not overheat. See on the technical datasheet for the appropriate processing temperatures.

9.2 Substances to avoid

Strong acids, oxidating agents.

9.3 Hazardous reactions

The product is chemically stable.

9.3.1 Hazardous decomposition products

Carbon monoxide (CO), carbon dioxide (CO₂), aldehydes, and other gaseous products of degradation can be given off if the product is greatly overheated.

SECTION 10: Toxicological information**10.1 Information on toxicological effects**

Toxicological data has not been determined for this product. Information is based on similar products.

10.1.1 Acute toxicity

Inhalation:	No data available, but not expected.
Ingestion:	No data available, but not expected.
Skin contact:	No data available, but not expected.
Eye contact:	No data available, but not expected.

Irritation

Skin: Not expected to be irritating.
Eye: Not expected to be irritating.

Sensitization: Not expected to be a skin sensitizer.

Repeated dose toxicity: Not expected to cause toxic effects.

Carcinogenicity: No data, but not expected.

Mutagenicity: No data, but not expected.

Toxicity for reproduction: No data, but not expected.

10.2 Other information

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

SECTION 11: Ecological information

11.1 Information on ecotoxicity

No ecotoxicological data has been generated for this product. Information is based on similar products.

11.1.1 Acute toxicity

Non-toxic to aquatic life.

11.2 Mobility in soil

The product is essentially insoluble in water. The product has low mobility in soil. Sinks in water.

11.3 Persistence and degradability

Assessment: No data available concerning biodegradation and elimination.

11.4 Bioaccumulation potential

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

11.5 Results of PBT and vPvB assessment

Not classified as PBT or vPvB.

11.6 Effect on Effluent Treatment

No information available.

SECTION 12: Disposal considerations

12.1 Waste treatment methods

Must be removed or incinerated in accordance with local, state or national legislation. Consider also return to the supplier.

SECTION 13: Transport information

13.1 International Air Transportation Association Classification (IATA)

This product is not classified as hazardous.

13.2 International Maritime Organization (IMDG)

This product is not classified as hazardous.

13.3 UN, IMO, ADR/RID, ICAO Code

This product is not classified as hazardous.

SECTION 14: Regulatory information

14.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

14.1.1 EU regulations

Authorisations and/or restrictions on use: None known.

14.1.2 National regulations

None known.

14.2 Chemical safety assessment

Not available.

SECTION 15: Other information

LEGEND

PEL:	Permissible Exposure Limit
MAC:	Maximum Allowed Concentration
STEL:	Short Term Exposure Limit
TLV:	Threshold Limit Value
PBT:	Persistent, Bioaccumulative and Toxic
vPvB:	very Persistent very Bioaccumulative

In addition to the information given in the safety data sheet we refer to the products specific 'Technical Datasheet'.

Disclaimer

The information given in the Material Safety Data Sheet only applies to the described product in connection with its appropriate use. All information is based on the latest state of our knowledge. In particular, it describes our product under the aspect of possible hazards and pertaining safety measures. The information does not constitute any guarantee of specific product and/or quality properties. The information given in this Material Safety Data Sheet is not required according to article 31 and Annex II of Regulation (EC) No.1907/2006. It merely serves the purpose of providing sufficient information on a voluntary basis to ensure safe use of the compound/product. There is no obligation on the part of colorFabb to revise this document.

SECTION 16: Emergency contact

Contact:

Contact person:	Michael Elstner
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