

MATERIAL SAFETY DATA SHEET

CarbonFil CF03

Date of issue: 15-05-2024 / Date of update: 15-05-2024



SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identification

Product name: CarbonFil CF03

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Filament for FDM 3D printing / pellets for FGF 3D printing.

1.3. Data on the supplier of the safety data sheet

Supplier: FormFutura BV
Address: Tarweweg 3, 6534 AM, Nijmegen, the Netherlands
Phone: +31 (0)88 743 4000
Email: product.compliance@formfutura.com

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

The substance is not classified as dangerous according to Regulation (EC) No 1272/2008 (CLP/GHS).

2.2 Label elements

Markings according to EC guidelines: According to the method of calculating the " General Classification Guideline for the Production of the EC " in the latest valid version, the product does not require labeling. The normal safety measures for handling chemicals should be observed.

2.3 Other hazards

The hazards of this product are associated mainly with its processing. Molten polymer will produce thermal burns. Polymer dust may represent a fire hazard at sufficient concentrations in presence of ignition sources.

SECTION 3: Composition/information on ingredients

3.1. Substances

PETG (co-polyester)
Carbon Fiber

SECTION 4: First aid measures

4.1. Description of first aid measures

Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician immediately.

Skin contact: Rinse immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician. Cool skin rapidly with cold water after contact with hot product. Do not peel filament from the skin. Consult a physician.

Inhalation: Move to fresh air. Call a physician immediately.

Ingestion: Drink water as a precaution. Never give anything by mouth to an unconscious person. Do not induce vomiting without medical advice. Call a physician immediately.

General information:



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If you feel unwell, seek medical advice (show the label where possible).

Note to physician

Treat symptomatically

SECTION 5: Firefighting measures

5.1. Extinguishing agents

Suitable extinguishing media:

Foam, Water, Carbon dioxide (CO₂), Dry chemical.

Unsuitable extinguishing media:

None

5.2. Specific hazards associated with a substance or mixture

Avoid generating dust. Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. During fire, gases hazardous to health may be formed.

5.3. Information for the firefighters

Special protective equipment for firefighters:

As in any fire, wear self-contained breathing apparatus, and full protective gear.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

See Section 8. Keep away from sources of ignition. Avoid dust formation. Avoid contact with skin and eyes.

6.2. Environmental precautions

Do not flush into surface and ground and ground water or sanitary sewer system.

6.3. Methods and materials preventing the spread of contamination and used for cleaning up

Shovel into suitable container for disposal.

SECTION 7: Handling and storage

7.1. Safe handling advice

Avoid contact with skin and eyes. Employees should be protected from the possibility of contact with the molten filament during printing. Use personal protective equipment if necessary. In the process of printing, gases and vapors may be generated which may irritate the respiratory system, eyes and skin. It should be processed in a well-ventilated room.

7.2. Storage

Store at a temperature between 10°C and 40°C. Protect from sunlight. Store in a dry place.

7.3. Precautions

No special precautions required.

SECTION 8: Exposure controls/personal protection

Engineering measures:



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Where possible, local exhaust ventilation and good general room ventilation should be used. Provide adequate exhaust ventilation in places of dust formation.

Exposure limits:

None established. This material can generate Particulates Not Otherwise Classifiable (PNOC).

General safety and hygiene:

Keep away from foodstuffs, beverages, and food.

Do not eat, drink, smoke.

Do not breathe dust / smoke.

Avoid contact with eyes and skin.

Wash hands before breaks and after work.

Breathing equipment:

It is not required under normal conditions of use. In the case of loose dust / fumes use a breathing apparatus.

Protection of hands:

To operate a hot product, heat resistant gloves.

Eye protection:

Protection glasses.

Body protection:

For transport, hot, molten product - heat-resistant protective clothing.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Solid.
Appearance:	Wire, filament, or pellets.
Color:	Black.
Odor:	Slight.
pH:	No information available.
Vapor pressure:	Not determined.
Vapor density:	Not determined.
Evaporation rate:	Not determined.
Partition Coefficient (n-octanol/water):	Not determined.
Density:	$\geq 1.27 \text{ g/cm}^3$
Decomposition temperature:	Not determined.
Boiling point / boiling range:	Not determined.
Melting point / melting range:	Not determined.
Autoignition temperature:	Not determined.
Freezing point:	Not determined.
Flash point:	Not determined.
Flammability:	No information available.
Flammability Limits in Air:	No information available.
Water solubility:	Insoluble.
Solubility in other solvents:	None known.
Solubility:	No information available.
Other Standards:	None



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9.2. Other standards

None.

SECTION 10: Stability and reactivity

10.1. Reactivity

No specific test data related to reactivity available for this product or its ingredients.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Conditions to avoid

No specific data.

10.4. Materials to avoid

Acetic Anhydride, acetone, aniline, benzene, chloroform, chromic acid, cyclohexanone, dimethylformamide, dioxane, ethyl acetate, phenol, tetrahydrofuran. Reactive with strong oxidizing agents, as well as strong acids and caustic will decompose polyester.

10.5. Hazardous decomposition products

Carbon monoxide, carbon dioxide, acetaldehyde.

10.6. Possibility of hazardous reactions

None expected under conditions of normal use.

10.7. Polymerization:

Not applicable.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Principle routes of exposure:	Eye contact, Skin contact, Inhalation, Ingestion.
Acute toxicity:	Not determined.
Local effects:	May cause eye/skin irritation. Product dust may be irritating to eyes, skin and respiratory system Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Specific effects:	May cause skin irritation and/or dermatitis, Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea inhalation of dust may cause shortness of breath, tightness of the chest, a sore throat and cough, Burning produces irritant fumes.
Mutagenic effects:	No data available.
Reproductive toxicity:	No data available.
Carcinogenic effects:	No data available.
Target organ effects:	Not determined.
Ingestion:	No data available.
Further information:	No information available.

SECTION 12: Ecological information

12.1. Ecotoxicity effects



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No data available.

12.2. Persistence and degradability

No data available.

12.3. Bioaccumulation

No data available.

12.4. Mobility in soil

No data available.

12.5. Soil/water partition coefficient (KOC)

Insoluble in water

12.6. Mobility

No data available.

12.7. Results of PBT and vPvB assessment

PBT: Not available.

vPvB: Not available.

12.8. Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal is recommended in accordance with national and local regulations. Remains of the product are not classified as hazardous waste. Waste disposal should be handed over to a company with appropriate waste management permits, as defined by national and possibly local regulations.

SECTION 14: Transport information

The substance is not subject to transport regulations on hazardous goods included in ADR (road transport), RID (rail transport), IMDG (marine transport) and ICAO/IATA (air transport).

SECTION 15: Regulatory information

Not regulated.

SECTION 16: Other information

Explanations of abbreviations:

- **CLP:** Regulation No. 1272/2008
- **IATA:** International Air Transport Association
- **IMDG:** International Maritime Dangerous Goods
- **IMO:** International Maritime Organisation
- **PBT:** Persistent, Bioaccumulative, Toxic
- **REACH:** Registration, Evaluation and Authorisation of Chemicals
- **vPvB:** very Persistent, very Bioaccumulative
- **STEL:** Short-Term Exposure Limit
- **LD50:** Lethal Dose
- **LC50:** Lethal Concentration



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- **EC50:** Effective Concentration 50%
- **DNEL:** Derived No-Effect Level
- **PNEC:** Predicted No-Effect Concentration
- **OEL:** Occupational Exposure Limit
- **ADR:** Agreement concerning the International Carriage of Dangerous Goods by Road
- **AND:** European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
- **RID:** regulations for international transport of dangerous goods by rail
- **MARPOL:** International Convention for the Prevention of Pollution from Ships

Disclaimer:

This safety data sheet (SDS) is issued based on the latest reference, data, etcetera currently available. The information in this SDS has been carefully assessed, but no guarantee is given for its accuracy. We cannot anticipate all conditions under which this product may be used. It is the user's responsibility to take appropriate safety measures for handling.

