1. Identification of the substance/preparation and of the company

1.1 Trade name:
CARBON FIBRE

1.2 Use of the product:
3Dprinter Filament

1.3 Supplier:
Filamentive
Bradford Chamber Business Park
Bradford
BD4 8BX
Phone number: +44 (0) 33 33 66 0020
Email: info@filamentive.com

2. Hazards identification

2.1 Classification of the substance or mixture
According to Regulation (EC) No 1272/2008 [CLP]
This mixture is classified as not hazardous.

2.2 Label elements
Labelling (CLP)
Hazard statements: not applicable
Safety precautions: not applicable

2.3 Other hazards
Not known

3. Composition/information on ingredients

3.2 Mixtures
None of the substances, named in the Candidate list art. 59 (1,10) of the REACH regulation EC no. 1907/2006 has been used in a concentration > 0,1%.

4. First aid measures

4.1 Description of first aid measures
General information:
Immediately remove any contaminated clothing, shoes or stockings.

After inhalation:
Provide fresh air. Seek medical attention if needed.

In case of skin contact:
The melted product can cause severe burns.
Do not attempt to remove molten product, or molten product that has cooled, from skin without
medical assistance.
After contact with molten product, cool skin area rapidly with cold water. Consult physician.
After eye contact:
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Consult an eye specialist in the event of irritation.
After swallowing:
Rinse mouth with water. Induce vomiting immediately and call a physician. If a person vomits when lying on his back, place him in the recovery position.

4.2 Most important symptoms and effects, both acute and delayed
No data available

4.3 Indication of any immediate medical attention and special treatment needed
Treat symptomatically.

5. Fire fighting measures

5.1 Extinguishing media
Suitable extinguishing media:
Water spray, Foam, Dry powder, Carbon dioxide (CO2).
Unsuitable extinguishing media: Do not use a solid water stream as it may scatter and spread fire.

5.2 Special hazards arising from the substance or mixture
Not available

5.3 Advice for fire fighters
Fire fighting measures
Wear a self-contained breathing apparatus and chemical protective clothing. Avoid inhalation of materials or combustion by-products.
Unusual Fire Hazards:
Do not allow fire water to penetrate into surface or ground water. Fire residuals and contaminated extinguishing water must be disposed of in accordance with the regulations of the local authorities.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation, especially in confined areas.

6.2 Environmental precautions
Do not allow to penetrate into soil, waterbodies or drains.

6.3 Methods and materials for containment and cleaning up
Use mechanical handling equipment. Keep in suitable, closed containers for disposal. Clean contaminated surface thoroughly.
7. Handling and storage

7.1 Handling
Advises on safe handling:
- Provide adequate ventilation, and local exhaust as needed. Do not breathe dust. Avoid dust formation.
- In the case of the formation of dust: Withdraw by suction.
- Molten material: Avoid contact with the substance.

Precautions against fire and explosion:
- In case of dust formation (Fine dust): May form explosible dust-air mixture if dispersed. Take precautionary measures against static discharges. Keep away from sources of ignition. Use grounding equipment. Use explosion-proof equipment and non-sparking tools/utensils.

7.2 Conditions for safe storage, including any incompatibilities
Requirements for storerooms and containers:
- Store in a well-ventilated place. Keep container tightly closed.
- Protect against heat /sun rays. Protect from moisture contamination.
- Keep away from oxidising agents and strongly acid or alkaline materials. Keep away from food, drink and animal feedingstuffs

8. Exposure controls/personal protection

8.1 Control Parameters
- Dnel: Dnel/Dmel- values are not available.
- PNEC: PNEC- values are not available.

8.2 Exposure controls
Provide good ventilation in the work area. Additional controls are not normally necessary when handling the polymer.
Thermal extrusion: Provide local exhaust ventilation to ensure that the workplace exposure limit is not exceeded.
Use of respiratory protection may be necessary during maintenance activities.

Personal protection equipment
Occupational exposure controls
Respiratory protection: In case of dust formation:
- Use filter type A-P2 according to EN 143.
Hand protection: Protective gloves according to EN 374.
- Protective gloves made of fabric or leather.
- Observe glove manufacturer's instructions concerning penetrability and breakthrough time.
- In case of melting: Impervious heat protective gloves according to EN 407.
- Glove material: Leather
Observe glove manufacturer’s instructions concerning penetrability and breakthrough time.

Eye protection: Tightly sealed goggles according to EN 166.
Body protection: Wear suitable protective clothing. Boots or safety shoes

General protection and hygiene measures:
- Do not breathe dust.
- Take off contaminated clothing and wash it before reuse.
- When using do not eat, drink or smoke. Wash hands before breaks and after work.
- When handling large quantities, supply emergency spray.
- In case of dust formation: Particular danger of slipping on spilled product on the ground.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Solid Filament</td>
</tr>
<tr>
<td>Odour</td>
<td>weak</td>
</tr>
<tr>
<td>Colour</td>
<td>depending on product grade</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No information available</td>
</tr>
<tr>
<td>pH</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Melting/freezing point</td>
<td>200-220 °C</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No information available</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td>UEL: No data available, LEL: No data available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapour density</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Relative density</td>
<td>Not measured</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td>Insoluble in water, soluble in THF, acetone or other solvents.</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water)</td>
<td>Not available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>not self-igniting</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>&gt;=280°C</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
</tbody>
</table>

10. Stability

10.1 Reactivity: No information available

10.2 Chemical stability:
Stable under recommended storage conditions.
10.3 Possibility of hazardous reactions:
In case of dust formation (Fine dust): May form explosible dust-air mixture if dispersed.

10.4 Conditions to avoid:
Avoid elevated temperatures for prolonged periods of time. Take precautionary measures against static discharges.

10.5 Incompatible materials:
Strong oxidizing materials.

10.6 Hazardous decomposition products
Build-up of dangerous/toxic fumes possible in cases of fire/high temperature.

11. Toxicological information

11.1 Information on toxicological effects

Toxicological effects:

- Acute toxicity (oral): Not applicable
- Acute toxicity (dermal): Not applicable
- Acute toxicity (inhalative): Not applicable
- Skin corrosion/irritation: Not irritating.
- Eye damage/irritation: Lack of data. May cause irritations.
- Sensitisation to the respiratory tract: No sensitization
- Skin sensitisation: No sensitization
- Dust: Can cause skin, eye and respiratory tract irritation.
- Processing, thermal hazards: Vapours: Can cause skin, eye and respiratory tract irritation.
- Germ cell mutagenicity/Genotoxicity: Lack of data. Not to be expected
- Carcinogenicity: Lack of data. Not to be expected
- Reproductive toxicity: Lack of data. Not to be expected
- Effects on or via lactation: Lack of data.
- Specific target organ toxicity (single exposure): Lack of data.
- Dusts: Irritating to eyes, respiratory system and skin.
- Specific target organ toxicity (repeated exposure): Lack of data.
- Aspiration hazard: Lack of data.

Symptoms
- Dust: Skin irritation, eye irritations and redness
  The melted product can cause severe burns.
12.1 Toxicity
   no relevant information available.

12.2 Persistence and degradability
   Difficult to degrade

12.3 Bioaccumulative potential
   To avoid bioaccumulation plastics should not be disposed in the sea or in other water environments.

12.4 Mobility in soil
   No data available

12.5 Results of PBT and vPvB assessment
   This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

12.6 Other adverse effects
   General information:
   Do not allow to enter into ground-water, surface water or drains.

13. Disposal considerations

13.1 Waste treatment methods
   Contaminated packaging
   Recommendation: Dispose of waste according to applicable legislation.
   Non-contaminated packages may be recycled.

14. Transport information

   Product has been classified as being non-dangerous substance according to transport regulations ADR, RID, IMDG, IATA/DGR

14.1 UN number
   Not applicable

14.2 UN proper shipping name
   Not applicable

14.3 Transport hazard class(es)
   Not applicable

14.4 Packing Group
   Not applicable

14.5 Environmental hazards
   No additional data is available

14.6 Special precautions for user
   No data available

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
   Not evaluated
Safety Data Sheet
According to EU Directive 1907/2006

Product name: CARBON-FIBRE
Date of issue: 31-05-2018 Version: 1.2

15. Regulatory information

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

Directive 96/82/EC does not apply.

Further information: Reserved for industrial and professional use.

15.2 Chemical Safety Assessment
For this substance a chemical safety assessment is not required

16. Other information

Information is referenced from other manufacturers.
For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).


The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.