Safety Data Sheet
According to EU Directive 1907/2006

Product name: bioPC
Date of issue: 24-10-2017 Version: 1.0

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

1.1 Trade name:
bioPC

1.2 Use of the product:
3D printer 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 classification (REGULATION (EC) No 1272/2008)

This product is not classified according to Regulation (EC) 1272/2008 and Directive 67/548/EEC.

2.2 Label elements

Not applicable.

3. Composition/information on ingredients

3.2 Mixtures

Chemical Name	CAS-No. EC-No. Registration number	Classification (1272/2008/EC)	Concentration [%]
Co-Polyester			70~90
Polyethylene			5~15
Calcium Carbonate			5~15

4. First aid measures

4.1 Description of first aid measures
In case of skin contact:
Remove contaminated clothing and shoes. Get medical attention if skin symptoms occur. If burned by contact with hot material, cool molten material adhering to skin as quickly as

possible with water, and see a physician for removal of adhering material and treatment of burn. Wash contaminated clothing and shoes before reuse.

After eye contact:

Get medical attention if eye symptoms occurred. In case of contact with molten substance, immediately flush eyes with water for at least 15 minutes. Get medical attention immediately

After swallowing:

Get medical attention if swallowed.

Indication of immediate medical attention and notes for physician

Call emergency medical service. Get medical advice/attention if needed. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. If burned by contact with molten material, cool quickly as possible with water, and then go to see a physician for treatment of burn.

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

no data available

5. Fire fighting measures

5.1 Extinguishing media

Suitable extinguishing media:

Water spray, Sand, 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

In case of fire may be liberated: carbon monoxide and carbon dioxide (CO2).

5.3 Advice for fire fighters

Fire fighting measures

Wear a self-contained breathing apparatus and chemical protective clothing.

Unusual Fire Hazards:

Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. In the event of fire and/or explosion do not breathe fumes.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Stop leak if you can do it without risk. Isolate exposed area. Keep unauthorized personnel away. Use certificated protective equipment. Ventilate the leaked area. Pellets on floor may be slippery and cause falls.

6.2 Environmental precautions

Spilled pellets may cause soil and air pollution.
Disposal should be carried in compliance with federal, state and local regulations regarding health, air and water pollution.

6.3 Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Collect dust using a vacuum cleaner equipped with HEPA filter. Stop the flow of material, if this is without risk.

Large Spills:

Wet down with water and dike for later disposal. Shovel the material into waste container. Following product recovery, flush area with water. Prevent entry into waterways, sewers, basements or confined areas.

Small Spills:

Sweep up or vacuum up spillage and collect in suitable container for disposal.

Additional information:

Special danger of slipping by leaking/spilling product.

7. Handling and storage

7.1 Handling

Avoid contact with molten material. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures

Prevention of Fire and Explosion:

Not available

7.2 Conditions for safe storage, including any incompatibilities

Keep container closed.
Do not expose to temperature exceeding 40°C for a prolonged time.
Protect from direct sunlight and all heat sources in order to avoid sintering.
Store container in a well dry/cool place.
Keep away from waterways and sewers.
Keep away from any source of ignition.

Other precautions:

Avoid contamination of foods.
Avoid inhalation of dust during the processing of the resin

8. Exposure controls/personal protection

8.1 Control parameters

Specific exposure limits have not been established or are not applicable unless listed below.

Regulation in Korean: Not applicable
US (NIOSH/OSHA AGGIH):
- NIOSH- TWA: Not applicable

- OHSA- TWA: Not applicable
- ACGIH- TWA: Not applicable

EU Regulation: Not applicable
Biological Exposure Index: Not applicable

8.2 Exposure controls

Engineering Controls

Provide local exhaust ventilation system or other engineering controls to keep the airborne below their respective threshold limit value.
Check legal suitability of exposure level.

Respiratory protection:

Wear NIOSH or European Standard EN 149 approved full or half face piece (with goggles) respiratory protective equipment when necessary.

Eye protection:

An eye wash unit and safety shower station should be available nearby work place.
Wear safety glasses to protect eyes from scattering toxic substance.

Body protection:

It is a good industrial hygiene practice to minimize skin contact. When material is heated, wear gloves to protect against thermal burns.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	Solid Filament
Odour	Odourless to mild
Colour	depending on product grade
Odour threshold	No information available
pH	Not applicable
Melting/freezing point	-/ -
Initial boiling point and boiling range	Not applicable
Flash point	No information available
Evaporation rate	Not applicable
Flammability (solid, gas)	No information available
Upper/lower flammability or explosive limits	UEL: No data available LEL: No data available
Vapour pressure	Not applicable
Vapour density	Not applicable
Relative density	> 1 g/ml (25°C)
Solubility(ies)	Insoluble
Partition coefficient (n-octanol/water)	Not available

Auto-ignition temperature	not self-igniting
Decomposition temperature	approx. 300 °C
Viscosity	Not applicable
Explosive properties	Dust explosion risk at fine dust
Oxidizing properties	Oxidising potential: not oxidising

10. Stability

10.1 Reactivity:
The product is stable and non-reactive under normal conditions of use, storage and transport.

10.2 Chemical stability:
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions:
None Known

10.4 Conditions to avoid:
Avoid elevated temperatures for prolonged periods of time.

10.5 Incompatible materials:
None Known

10.6 Hazardous decomposition products
Carbon Dioxide, Carbon Monoxide

11. Toxicological information

11.1 Information on toxicological effects

Toxicological effects:
Methanol (impurity) (CAS 67-56-1)

Acute toxicity (oral):	Not available
Acute toxicity (dermal):	Not available
Acute toxicity (inhalative):	Not available

Skin corrosion/irritation:	Molten material will produce thermal burns
Eye damage/irritation:	Molten material will produce thermal burns.
Sensitisation to the respiratory tract:	Not available

Skin sensitisation:	Not available
Germ cell mutagenicity/Genotoxicity:	Not available
Carcinogenicity:	IARC, NTP, OSHA, ACGIH, EU Regulation 1272/2008, US EPA: not listed
Reproductive toxicity:	Not available
Specific target organ toxicity (single exposure):	Not available
Specific target organ toxicity (repeated exposure):	Not available
Aspiration hazard:	Not available

12. Ecological information

12.1 Toxicity
No data available.

12.2. Persistence and degradability
Not available

12.3 Bioaccumulative potential
No data available.

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
No data available.

12.6 Other adverse effects
No data available.

13. Disposal considerations

13.1 Waste treatment methods

Disposal method
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Disposal precaution
Consider the require attentions in accordance with waste treatment management regulation.

14. Transport information

14.1 UN number
Not regulated as a hazardous material.

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

15. Regulatory information

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

This product is not classified and labelled as dangerous according to EC directives.

FOREIGN INVENTORY STATUS:

EU (EINECS/ELINCS/NLPL): This product is not classified as a hazardous substance under EU regulations. The polymer is exempted from listing on EINECS.

TSCA (US Toxic Substances Control Act): All components of this product are listed on the TSCA inventory. Any impurities present in this product are exempt from listing. The polymer is exempted from listing on TSCA.

DSL (Canadian Domestic Substances List) and CEPA (Canadian Environmental Protection Act): All components of this product are listed on the DSL. Any impurities present in this product are exempt from listing. The polymer is exempted from listing on DSL.

ENCS (Japanese Existing and New Chemical Substances): This product is listed on the Japanese Existing and New Chemical Substances

ECL (Korean Toxic Substances Control Act): All components of this product are listed on the Korean inventory or otherwise comply with the Korean Toxic Substances Control Act.

IECSC (Inventory of Existing Chemical Substances in China): All components of this product are listed on the Inventory of Existing Chemical Substances in China. The polymer is exempted from listing on IECSC.

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).

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006 and Regulation (EC) No. 2015/830. Label element according to Regulation (EC) No 1272/2008.

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.