

# SAFETY DATA SHEET



## 1. IDENTIFICATION OF THE SUBSTANCE AND THE COMPANY

- 1.1 Identification of the substance or preparation:** Colorfabb varioShore TPU is a high quality expanding TPU 3D printing filament with base Shore hardness of 92A. The active foaming technology can be used to achieve light weight parts, soft tough surfaces and lower Shore hardness's. All information in this SDS is applicable to the TPU filament material, not the filament spool itself.
- 1.2 Use of the substance or preparation:** FDM 3D printing
- 1.3 Company/undertaking identification** Colorfabb B.V.  
NL-5951 DK Belfeld, The Netherlands  
Tel.: +31 77 4664015  
Fax: +31 77 3971414  
E-mail: [sales@colorfabb.com](mailto:sales@colorfabb.com)
- 1.4 Emergency telephone:** Colorfabb B.V.; Tel.: 077 4664015 (only during office hours)

## 2. HAZARDS IDENTIFICATION

- 2.1 Classification** The material is not hazardous according EC 1272/2008
- 2.2 Label elements**
- |                         |   |
|-------------------------|---|
| Health hazards:         | Not hazardous                                     |
| Environmental hazards   | Not hazardous                                     |
| Hazard symbol           | None  |
| Signal Word             | None  |
| Hazard Statement        | None  |
| Precautionary statement | None  |
| PBT and vPvB substances | Material does not contain PBT and vPvB substances |

## 3. COMPOSITION AND INFORMATION ON INGREDIENTS

- 3.1 Description** The material is a mixture of chemical substances in a solid polymer matrix.

### 3.2 Hazardous ingredients

Substance name	CAS number	Concentration	Classification	H-Phrases
No hazardous ingredients	N/A	N/A	None	None

- 3.3 Additional information** The material does not contain amounts of substances fulfilling the criteria of hazard classification.

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## 4. FIRST AID MEASURES

- 4.1 Skin contact** If burned by contact with molten material, cool down with water for at least 10 minutes. In case of severe burns, do not remove molten material from skin and consult a physician.
- 4.2 Eye contact** Not likely due to physical state. Grinding or pelletizing of filament may lead to fine dust particles which can cause eye irritation. Wash with plenty of water and get medical attention if symptoms persist.
- 4.3 Inhalation** Not likely due to physical state.
- 4.4 Ingestion** Not likely due to physical state. Material is not expected to be absorbed by gastrointestinal, No first aid measures necessary.

## 5. FIRE FIGHTING MEASURES

- 5.1 Extinguishing media** Water mist, carbon dioxide, foam, dry powder
- 5.2 Extinguishing media not to be used for safety reasons** High pressure water jet
- 5.3 Special hazards arising from the mixture** Thermal decomposition and burning may release oxides of carbon and nitrogen, acetaldehyde
- 5.4 Protective equipment for fire fighters** Use full protective clothing for chemicals and a self-contained breathing apparatus

## 6. ACCIDENTAL RELEASE MEASURES

- 6.1 Personal precautions** Avoid dust formation and static discharge. Do not overheat material
- 6.2 Environmental precautions** Should not be released into environment. Do not allow material to enter drains or water courses.
- 6.3 Cleanup, containment and disposal of spill** Avoid dust formation. Sweep up into suitable container for disposal.
- 6.4 Reference to other sections** See section 8 and 13

## 7. HANDLING AND STORAGE

- 7.1 Precautions for safe handling** Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke at the

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workplace. Avoid dust formation by cutting or grinding. During printing, ensure good ventilation and local exhaust.

## 7.2 Conditions for safe storage

To ensure technical integrity of the product store in the original container/box and keep at temperatures below 50°C and in a dry place. Protect from moisture, product may be hygroscopic

## 7.3 Specific use

Under anticipated conditions of use no further measures required. No available exposure scenario's.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### 8.1 Control parameters

Exposure limits	No information available
Biological limit values	Not established
Recommended monitoring procedures	No information available
Derived No Effect Level (DNEL)	No information available

### 8.2 Exposure controls

Appropriate Engineering Controls	Keep at temperatures below 250°C. Ensure adequate ventilation in confined areas.
Individual protection measures	
Eye protection	Not required (for FDM printing)
Hand protection	Not required (for FDM printing)
Skin protection	Not required (for FDM printing)
Respiratory protection	Not required (for FDM printing)
Hygiene measures	Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product.
Environmental exposure controls	Do not allow product to enter drains, water courses or soil.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 General information

Density	1.0-1,1 g/cm <sup>3</sup>
Odour	Faint

### 9.2 Important health, safety and environmental information

Glass transition	No data available
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<b>Boiling point</b>	No data available
<b>Auto flammability</b>	No data available
<b>Bulk density</b>	n.a.
<b>Melting point</b>	No data available
<b>pH-value</b>	No data available
<b>Viscosity</b>	No data available
<b>Flashpoint</b>	n.a.
<b>Solubility in water</b>	Insoluble
<b>Vapour pressure</b>	No data available

## 10. STABILITY AND REACTIVITY

<b>10.1 Reactivity</b>	No data available
<b>10.2 Chemical stability</b>	Stable for handling under normal handling conditions
<b>10.3 Possibility of hazardous reactions</b>	No hazardous reactions with other chemicals known, under normal handling conditions.
<b>10.4 Conditions to avoid</b>	Do not grind, pelletize or mill the material . Avoid temperatures above 250°C.
<b>10.5 Incompatible materials</b>	Avoid water which can cause degradation of material. Material can react with strong oxidizers or strong acids
<b>10.6 Hazardous decomposition products</b>	Thermal decomposition or combustion may liberate carbon dioxides and other toxic gases or vapors. May also include carbon dioxides, acetaldehyde, isocyanates and small amounts of hydrogen cyanide

## 11. TOXICOLOGICAL INFORMATION

<b>Skin irritation</b>	No information available
<b>Eye irritation</b>	No information available
<b>Skin sensitisation</b>	No information available
<b>Respiratory sensitisation</b>	No information available
<b>CMR effects</b>	No information available
<b>General remarks</b>	No harmful, toxic and sensitive effects have been reported to date Information listed in this section is transferred from safety data from the ingredients of this product.

## 12. ECOLOGICAL INFORMATION

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<b>12.1 Aquatic toxicity</b>	No information available
<b>12.2 Persistence and degradability</b>	No information available
<b>12.3 Bioaccumulative potential</b>	No information available
<b>12.4 Mobility in soil</b>	No information available
<b>12.5 Results of PBT and vPvB assessment</b>	No information available
<b>12.6 Other adverse effects</b>	No information available

## 13. DISPOSAL CONSIDERATIONS

<b>13.1 Waste treatment methods</b>	Dispose of in accordance with local regulations
<b>13.2 Additional information</b>	n.a.
<b>13.3 Packaging</b>	Dispose of in accordance with local regulations

## 14. TRANSPORT INFORMATION

<b>14.1 RID / ADR</b>	Not listed / free
<b>14.2 ICAO / IATA-DGR</b>	Not listed / free
<b>14.3 GGVSEE / IMDG-CODE</b>	Not listed / free
<b>14.4 UN-NR</b>	Not listed / free

## 15. REGULATORY INFORMATION

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

<b>Restrictions of use</b>	None
<b>Other regulations</b>	No information available

<b>15.2 Chemical safety assessment</b>	No Chemical Safety Assessment has been carried out
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## 16. OTHER INFORMATIE

**Relevant H-phrase:** None

**Changes compared to previous version:** n.a.

**Abbreviations**

- REACH; Registration, Evaluation, Authorisation and restriction of chemical substances
- EC: European Community
- STOT: Specific Target Organ Toxicity
- PBT: Persistent, Bioaccumulating, Toxic
- vPvB: very Persistent, very Bioaccumulating
- ADR; Accord européen relative au transport international des marchandises Dangereuses per Route
- ADN: Accord européen relative au transport international des marchandises Dangereuses per voies de Navigation intérieures
- RID: Regulations for the international Transport of dangerous goods by rail
- IMDG: International maritime dangerous goods code
- ICAO: International civil aviation organization

This safety datasheet complies with the requirements of EC 1907/2006 and regulation EC 2015/830. Label element according to regulation EC 1272/2008.

### Disclaimer

The information provided in the safety datasheet 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 only relates 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.

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