

SAFETY DATA SHEET



1. IDENTIFICATION OF THE SUBSTANCE AND THE COMPANY

- 1.1 Identification of the substance or preparation:** ColorFabb TPU94A HH is special aromatic polycarbonate-based thermoplastic polyurethane filament. It features a Shore hardness of 94A. The material is uniquely suited for parts requiring long term heat performance and flexibility. The material can be printed on most common desktop platforms.
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
- 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.

Safety datasheet conform regulation (EC) 2015/830

Page: 1 of 6
Revision: 1.0
Revision date: April 1, 2020
Replaces version of:

SAFETY DATA SHEET



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** Use water spray, dry chemical or foam for extinction. CO2 may be ineffective on large fires.
- 5.2 Extinguishing media not to be used for safety reasons** Not determined.
- 5.3 Special hazards arising from the mixture** See section 10 for additional information.
- 5.4 Protective equipment for fire fighters** Wear full protective firegear including self-containing breathing apparatus operated in the positive pressure mode with full facepiece, coat, pants, gloves and boots.

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 workplace. Avoid dust formation by cutting or grinding.

Safety datasheet conform regulation (EC) 2015/830

Page: 2 of 6
Revision: 1.0

Revision date: April 1, 2020
Replaces version of:

SAFETY DATA SHEET



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. Store away from incompatible materials. See section 10 for incompatible materials. Store in dry, well ventilated place away from sources of heat and direct sunlight.

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

Occupational Exposure Limits

None of the components have assigned exposure limits.

8.2 Exposure controls

Appropriate Engineering Controls

Keep at temperatures below 232°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 g/cm³

Odour Faint

9.2 Important health, safety and environmental information

Glass transition No data available

Boiling point No data available

Auto flammability No data available

Bulk density n.a.

Melting point No data available

pH-value No data available

Safety datasheet conform regulation (EC) 2015/830

Page: 3 of 6

Revision date: April 1, 2020

Revision: 1.0

Replaces version of:

SAFETY DATA SHEET



Viscosity	No data available
Flashpoint	n.a.
Solubility in water	Insoluble
Vapour pressure	No data available

10. STABILITY AND REACTIVITY

10.1 Reactivity	No data available
10.2 Chemical stability	Stable for handling under normal handling conditions
10.3 Possibility of hazardous reactions	No hazardous reactions with other chemicals known, under normal handling conditions.
10.4 Conditions to avoid	Do not grind, pelletize or mill the material .
10.5 Incompatible materials	None known, avoid contact with reactive chemicals.
10.6 Hazardous decomposition products	Thermal decomposition or combustion may generate smoke, carbon monoxide, carbon dioxide , nitrogen oxides, and other products of incomplete combustion. May also include isocyanates and small amounts of hydrogen cyanide.

11. TOXICOLOGICAL INFORMATION

Skin irritation	No information available
Eye irritation	Not classified as a primary eye irritant. Remarks: At processing or combustion temperatures this product may emit fumes and vapors that cause irritation, possibly severe, to the eyes.
Skin sensitisation	No information available
Respiratory sensitisation	Under decomposition conditions, isocyanates may be generated from this product. Isocyanates can cause skin sensitization and/or respiratory sensitization.
CMR effects	No information available
General remarks	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

12.1 Aquatic toxicity	No information available
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Safety datasheet conform regulation (EC) 2015/830

Page: 4 of 6
Revision: 1.0

Revision date: April 1, 2020
Replaces version of:

SAFETY DATA SHEET



12.2 Persistence and degradability	No information available
12.3 Bioaccumulative potential	No information available
12.4 Mobility in soil	No information available
12.5 Results of PBT and vPvB assessment	No information available
12.6 Other adverse effects	No information available

13. DISPOSAL CONSIDERATIONS

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

14. TRANSPORT INFORMATION

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

15. REGULATORY INFORMATION

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

Restrictions of use	None
Other regulations	No information available

15.2 Chemical safety assessment	No Chemical Safety Assessment has been carried out
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SAFETY DATA SHEET



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.

Safety datasheet conform regulation (EC) 2015/830

Page: 6 of 6

Revision date: April 1, 2020

Revision: 1.0

Replaces version of:
