

Safety Data Sheet

by Commission Regulation (EC) No 830/2015 (REACH)

LastFlex



Revision date: 16.05. 2026

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

1.1 Identification of the substance / preparation

Product name: Torofil LastFlex

1.2 Application

Use of the substance or mixture: Filaments for 3D printing
Recommended restrictions on use: Designed for professional / industrial use.

1.3 Manufacturer / Supplier:

Company: Michael Handwerker
Address: Marie-Curie-Str. 6
85055 Ingolstadt
Germany
VAT- ID: DE353251963
Website: www.toro3d.eu
Telephone: +49 841 3053220
E-mail: info@toro3d.eu

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification

The substance or mixture is not hazardous according to Regulation (EC) No 1272/2008.

2.2 Label elements

The substance or mixture is not hazardous according to Regulation (EC) No 1272/2008.

2.3 Other hazards

Potential health effects:

Acute exposure: The melted product can cause serious burns.

Inhalation: Vapours released due to thermal decomposition may cause irritation of respiratory system. Toxic effect may occur.

Skin contact: Contact with hot material may be irritation to skin.

Eye contact: Contact with hot material may be irritation to eyes.

Environmental effects:

Polymer is inert, but not biodegradable on the basis of the structure.

Physical and chemical hazards:

During thermal decomposition toxic and corrosive products are released.

Decomposition products: See Section 10.

Results of PBT and vPvB assessment: No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance

Not applicable

3.2 Mixture

Chemical nature of the mixture: Polyether block amide.

Additional information: No dangerous substances above limits that need to be mentioned are contained.

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SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

First aider needs to protect himself. Remove from exposure. Keep the victim at rest. Do not leave the victim unattended.

Eye contact: In the case of contact with molten product, immediately rinse eyes and eyelids with plenty of water for more than 10 minutes. In case of smoke irritation, wash the eyes with water until the irritation disappears. Get medical attention.

Skin contact: In the case of contact with molten product, wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Do not tear off the solid product from the skin. Get medical attention.

Ingestion: In the case of contact with molten product, rinse mouth with cool water. Get medical attention.

Inhalation: In the case of accidental inhalation of vapours or decomposition products, move to fresh air. If symptoms occur, get medical attention.

4.2 Most important symptoms and effects, both acute and delayed

The melted product can cause severe burns.

Inhalation of processing vapours: Can cause skin, eye and respiratory tract irritation.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media: Foam, water spray, carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Temperatures 300–350 °C possible release of:
monomer and oligomer (white fumes)

Temperature above 350 °C: thermal decomposition giving toxic and corrosive products:
carbon monoxide (CO), ammonia, amino derivatives

Temperature above 500 °C: formation of toxic products through combustion:
carbon oxides, hydrogen cyanide (hydrocyanic acid), (traces)

5.3 Advice for firefighters

Special protective equipment for fire-fighters: Wear self-contained breathing apparatus and personal protective equipment.

Additional information: Seal off endangered area. Remove persons to safety. Do not allow water used for extinguishing to enter drains, grounds, or waterways.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Avoid the contact with the molten material. In case of overheating (due to rise of temperature, fumes or smoke are formed), cool the melt in a water bath. Do not breath the vapours. Wear appropriate protective equipment. Take off contaminated clothing immediately and wash it before reuse. Provide adequate ventilation. Provide a conveniently located respiratory protective device.

6.2 Environmental precautions

Do not release into the environment. Prevent from entering into drains or water courses.

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6.3 Methods and material for containment and cleaning up

Throw into appropriate disposal containers. Recycle or dispose of in compliance with current legislation. Other information: Caution: This product can cause the floor to be slippery.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Advices on safe handling:

In case of melting: Do not overheat to avoid thermal decomposition.
Make sure the air exchange is sufficient and the working rooms are air suctioned.
Avoid exceeding WEL threshold levels. Do not breathe vapours.
Wear appropriate protective equipment. Take off contaminated clothing immediately and wash it before reuse. After work, wash hands and face.
In thermal processing: Risk of skin burns. Avoid the build-up of electrostatic charge.

7.2 Conditions for safe storage, including any incompatibilities **Advice on protection against fire and explosion**

Take precautionary measures against static discharges.

Storage

Keep the package well closed and dry in a dry and well-ventilated place. Protect from heat. Keep away from food, drink and animal feeding stuffs.

Storage temperature: < 40 °C

Incompatible products: strong acids, strong oxidizing agents

7.3 Specific end uses

No information is available.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Exposure limit values: Not relevant
Derived No Effect Level (DNEL): This information is not required.
Predicted No Effect Concentration: This information is not required.

8.2 Exposure controls

In case of melting: Provide good ventilation or exhaust system or work with completely self-contained equipment.

Individual protection measures, such as personal protective equipment

Eye protection: Wear glasses or goggles when handling product in molten state. Wear face shield.

Hand protection: Gloves, when handling product in molten state.

Skin and body protection: Wear suitable protective clothing.
Take off contaminated clothing immediately and wash it before reuse.
Do not eat, drink or smoke when using.
Before breaks and after work, wash hands and face.
Safety shower and eye wash station should be easily accessible to the work area.

Respiratory protection: In case of exceeded concentration, wear self-contained breathing apparatus.

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Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels. See Section 6.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical Appearance:	Solid, natural or coloured filament
Odour:	none
pH:	Not relevant
Evaporation rate	Not relevant
Melting point/freezing point:	146 °C
Boiling point:	Not relevant
Flash point:	Not relevant
Auto-ignition temperature	Not applicable
Decomposition temperature:	300–350 °C
Flammability (solid, gas):	No data available
Vapour pressure:	Not relevant
Vapour density:	Not applicable
Solubility:	
Water solubility	Insoluble substance
Dynamic viscosity:	Not applicable
Kinematic viscosity:	Not applicable
Explosive properties:	Not relevant (due to its chemical structure)
Oxidising properties:	Not relevant (due to its chemical structure)

9.2 Other information

No additional information available.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

No data available.

10.2 Chemical stability

Stable at ambient temperature and under recommended conditions of storage and use.

10.3 Possibility of hazardous reactions

None under normal conditions of use.

10.4 Conditions to avoid

Moisture. Temperatures above 60 °C. Cannot withstand heat. Remove all sources of ignition.

10.5 Incompatible materials

Strong acids, strong oxidizing agents.

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10.6 Hazardous decomposition products

Temperatures 300–350 °C	possible release of: monomer and oligomer (white fumes)
Temperature above 350 °C:	thermal decomposition giving toxic and corrosive products: carbon monoxide (CO), ammonia, amino derivatives
Temperature above 500 °C:	formation of toxic products through combustion: carbon oxides, hydrogen cyanide (hydrocyanic acid), (traces)

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity:

Acute toxicity (oral): According to its composition, this product should not be harmful in normal conditions of use.

Acute toxicity (dermal): According to its composition, this product should not be harmful in normal conditions of use.

Acute toxicity (inhalative): Inhalation of vapours due to thermal decomposition. Risk of irritation of respiratory system. Toxic effects cannot be excluded. Local effects (corrosion/irritation/serious eye damage):

Skin contact: According to its composition, this product can be slightly or not irritating to skin. Contact with the product, when handled at high temperatures, can cause serious burns. At high temperature, products of thermal decomposition can be irritating to skin.

Eye contact: According to its composition, this product can be slightly or not irritating to skin. Contact with the product, when handled at high temperatures, can cause serious burns. At high temperature, products of thermal decomposition can be irritating to eyes.

Respiratory or skin sensitisation:

Inhalation: No data available.

Skin contact: According to its composition, this product can be considered as not a skin sensitizer, no reported effect on man in industry.

CMR effects:

Mutagenicity: According to its composition, this product should not be harmful in normal conditions of use, it contains no ingredient considered as genotoxic.

Carcinogenicity: According to its composition, this product should not be harmful in normal conditions of use.

Reproductive toxicity: Lack of data.

Fertility: According to its composition, this product should not be harmful in normal conditions of use.

Fetal development: According to its composition, this product should not be harmful in normal conditions of use.

Specific target organ toxicity

Single exposure: Dust inhalation. Risk of irritation of respiratory system.

Repeated exposure: According to its composition, this product should not be harmful in normal conditions of use.

Aspiration hazard: Not applicable.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

No additional information available.

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12.2 Persistence and degradability

Product is not biodegradable. Inert polymer.

12.3 Bioaccumulative potential

No additional information available.

12.4 Mobility in soil

No additional information available.

12.5 Results of PBT and vPvB assessment

No additional information available.

12.6 Other adverse effects

Avoid the discharge into the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Recommendation:

Recycling or special waste incineration.

Additional information:

The user's attention is drawn to the possible existence of specific European, national or local regulations regarding disposal. Clean empty packing can be re-used. Packaging that can't be re-used should be recycled if possible.

SECTION 14: TRANSPORT INFORMATION

According to: ADR, RID, IMDG, IATA, ADN.

14.1 UN number

Not regulated for transport.

14.2 UN proper shipping name

Proper Shipping Name (ADR): Not restricted.

Proper Shipping Name (IMDG): Not restricted.

Proper Shipping Name (IATA): Not restricted.

Proper Shipping Name (ADN): Not restricted.

Proper Shipping Name (RID): Not restricted.

14.3 Transport hazard class

ADR

Transport hazard class(es) (ADR): Not applicable.

IMDG

Transport hazard class(es) (IMDG): Not applicable.

IATA

Transport hazard class(es) (IATA): Not applicable.

ADN

Transport hazard class(es) (ADN): Not applicable.

RID

Transport hazard class(es) (RID): Not applicable.

14.4 Packing group

Packing group (ADR): Not applicable.

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Packing group (IMDG):	Not applicable.
Packing group (IATA):	Not applicable.
Packing group (ADN):	Not applicable.
Packing group (RID):	Not applicable.

14.5 Environmental hazards

Dangerous for the environment:	No
Marine pollutant:	No
Other information:	No supplementary information available

14.6 Special precaution for user Overland transport No data available

Transport by sea

No data available

Air transport

No data available

Inland waterway transport

Carriage prohibited (ADN):	No
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Not subject to ADN:	No
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Rail transport

Carriage prohibited (RID):	No
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14.7 Transport in bulk according to Annex II of Marpol 73/78 and the IBC Code

Not applicable.

SECTION 15: REGULATORY INFORMATION

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

15.1.1 EU-Regulations

Contains no REACH substances with Annex XVII restrictions 15.1.2

National regulations

No additional information available.

15.2 Chemical safety assessment

No additional information available.

SECTION 16: OTHER INFORMATION

The information is published in the best knowledge and information of the company. The final usage of the product must be assessed by the user. The company is not responsible for any risks caused by incorrect handling or processing.