

SAFETY DATA SHEET

TECHFORCE 6

According to regulation (EC) 1907/2006
Date of compilation / revision: 19.04.2019
Version / revision n°: 2

This present material data sheet is in accordance with 29 CFR 1910.1200:2012, ANSI Z400.1-2010, and ISO 11014-1: 2009.

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

1.1 Product Name :	TECHForce
1.2 Chemical name:	Polyamide 6
1.3 Recommended use:	3D Printing
1.4 Details of the supplier of the safety data sheet:	Tag Plasturgie
Address:	N°188 zone industrielle ouest Mohammedia, Maroc
Telephone:	+212 (0)5 23 31 51 40
Email:	contact@tag-plasturgie.com
1.5. Emergency telephone number	
France: ORFILA (INRS):	+33 (0)1 45 42 59 59
Belgium:	+32 02/264 96 36

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

2.1. Classification of the substance or mixture:	This product is not classified according to 29 CFR 1910.1200 Hazard Communication Standard 2012.
Hazard Statement:	None
Precautionary Statement:	None
Signal word:	None
Pictogram:	None
Potential health effects:	See Section 11 for more information
Environmental precautions:	See Section 12 for more information
2.2. Label elements:	The product is classified as not hazardous according to regulation (EC) 1272/2008.
2.3 Other hazards:	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher. Due to the presence of glass fibers and carbon fibers: May cause temporary skin and mucous membranes itching due to the mechanical abrasion effect of the fibers.

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3. Composition / information on ingredients

- 3.1 Substances: The product does not contain substances classified as being hazardous to human health or the environment pursuant to the provisions Regulation (EU) 1272/2008 (CLP) and its amendments and supplements in such quantities as to require the statement.
- 3.2 Mixtures
Chemical nature of the mixture: Carbon fibers: 10%
Glass fibers: 20%
Polyamide : 68%
Presence of additives in quantities lower than 2%.

4. First-aid measures

- 4.1. Description of first aid measures:
- Inhalation: Remove to fresh air.
- Eye contact: Rinse thoroughly with plenty of water for at least 15 minutes, also under the eyelids.
Consult a doctor.
- Skin contact: Wash skin with soap and water when in contact with molten residues.
- Ingestion: Drink plenty of water. Do not induce vomiting without medical advice.
Call a doctor immediately.
- 4.2. Most important symptoms and effects, both acute and delayed: None known.
- 4.3. Indication of any immediate medical attention and special treatment needed: Note to doctors: Treat symptomatically.

5. Firefighting measures

- 5.1 Suitable extinguishing media: Water spray
Dry chemical
Foam
Carbon dioxide (CO₂)
- 5.2 Special hazards arising from the substance or mixture:
Specific hazards during fire fighting : Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.
- Hazardous combustion products: No hazardous combustion products are known
- 5.3 Advice for firefighters: Special protective equipment

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for fire-fighters: Wear an approved positive pressure self-contained breathing apparatus in addition to standard fire fighting gear.

Minimize dust generation and accumulation.

Further information :

6. Accidental Release Measures

6.1 Personal precautions:

Use personal protective equipment. Avoid contact with skin and eyes. Avoid dust formation. Remove all sources of ignition. Sweep up to prevent slipping hazard.

6.2 Environmental precautions:

Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system.

6.3 Methods for cleaning up:

Clean up promptly by scoop or vacuum. Sweep up and shovel into suitable containers for disposal.

7. Handling and storage

7.1 Precautions for safe handling

Advice on safe handling:

Wash thoroughly after handling.

Use only in area provided with appropriate exhaust ventilation.

Minimize dust generation and accumulation.

Advice on protection against fire and explosion:

Minimize dust generation and accumulation.

Hygiene measures:

Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage:

Keep tightly closed.

8. Exposure controls / personal protection

8.1 Control parameters:

Contains no substances with occupational exposure limit values.

8.2 Exposure Control:

Engineering measures:

Good general ventilation (typically 10 air changes per hour) should be used.

Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

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8.3 Personal protective equipment:

Eye protection:	Safety glasses with side-shields. Goggles.
Skin and body protection:	Impervious clothing.
Respiratory protection:	Minimise dust generation and accumulation. Wear respiratory protection
Hand protection:	Preventive skin protection.
Hygiene measures:	Avoid contact with skin, eyes and clothing.
Special hazard:	Workers should be protected from the possibility of contact with molten material during fabrication.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties:

Physical state:	Solid
Appearance:	Monofilament
Odour:	No data available.
Colour:	Black
Odour threshold:	No information available
Melting point/range:	200 – 220 °C (Polymer)
Softening point:	>800°C (glass)
Boiling point/boiling range:	Not applicable (decompose on heating – polymer)
Flash point:	Not applicable
Evaporation rate:	Not applicable
Flammability (solid, gas):	HB (UL 94, 0,8 mm) - polymer
Vapour pressure:	No data available
Vapour density:	No data available
Density:	1.14 g/cm ³ , at 20°C (polymer)
Water solubility:	insoluble
Partition coefficient:	n-Octanol/water not applicable
Auto-ignition temperature:	not available
Decomposition temperature:	not available
Viscosity, kinematic:	Not applicable
Dust explosion class:	Not applicable
Minimum ignition energy:	Not applicable
Oxidizing properties:	Not relevant (due to the chemical structure)

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10. Stability and reactivity

10.1 Reactivity:	None expected under conditions of normal use.
10.2 Chemical stability:	Stable under recommended storage conditions.
10.3. Possibility of hazardous reactions:	None under normal processing
10.4 Conditions to avoid:	Avoid keeping resin molten for excessive periods of time at elevated temperatures. Prolonged exposure will cause polymer degradation.
10.5 Materials to avoid:	Strong oxidizing agents
10.6 Hazardous decomposition products:	Thermal decomposition giving toxic and corrosive products: Carbon monoxide, ammonia, amino-derivatives.
Formation of toxic products through combustion:	Carbon oxides, Hydrogen cyanide (hydrocyanic acid), NOx, traces of toxic products.

11. Toxicological information

11.1. Information on toxicological effects	
Information on likely routes of exposure:	
Inhalation:	Specific test data for the substance or mixture is not available.
Eye contact:	Specific test data for the substance or mixture is not available.
Skin contact:	Dust and fibers that may be generated by mechanical treatment may cause temporary skin and mucous membranes itching due to the abrasion effect of the fibers. The symptoms disappear when the exposure ceases. Mechanical abrasion is not considered as a health hazard in the meaning of Regulation EC 1272/2008. Continuous filament glass fibers are not classified as irritants under the regulation EC 1272/2008.
Ingestion:	Specific test data for the substance or mixture is not available.
Delayed and immediate effects as well as chronic effects from short and long-term exposure:	
Skin corrosion/irritation:	No information available.
Serious eye damage/eye irritation:	No information available.
Respiratory or skin sensitisation:	No information available.
Germ cell mutagenicity:	No information available.
Carcinogenicity:	No information available.
Reproductive toxicity:	No information available.

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STOT - single exposure: No information available.
STOT - repeated exposure: No information available.
Aspiration hazard: No information available.

12. Ecological information

12.1 Toxicity: No data available
12.2 Persistence and degradability: Inert polymer, not biodegradable on the basis of its structure
12.3 Bioaccumulative potential: No data available
12.4 Mobility in soil: No data available
12.5 Results of PBT and vPvB assessment: Based on the available information, it is not possible to conclude on PBT and vPvB criteria according to REACH regulation , annex XIII
12.6 Other adverse effects: No data available

13. Disposal considerations

13.1. Waste treatment methods: Waste from residues / unused products: In accordance with local and national regulations. Should not be released into the environment. Do not contaminate ponds, waterways or ditches with chemical or used container.
Contaminated packaging: Do not re-use empty containers. Empty containers should be transported/delivered using a registered waste carrier to local recyclers for disposal.

14. Transport information

IMDG/IM , RID, ADR, ICAO, IATA, DOT, TDG, MEX : Not regulated, not classified as dangerous in the meaning of transport regulations

15. Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture:
Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals: Not applicable
REACH - Candidate List of Substances of Very High Concern for Authorization (Article 59).: Not applicable
Regulation (EC) No 1005/2009 on substances that deplete the ozone layer: Not applicable
Regulation (EC) No 850/2004 on persistent organic pollutants: Not applicable

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Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards

involving dangerous substances: Not applicable

The ingredients of this product are reported in the following inventories:

DSL :	All components of this product are on the Canadian DSL
AICS :	On the inventory, or in compliance with the inventory
ENCS :	On the inventory, or in compliance with the inventory
KECI :	On the inventory, or in compliance with the inventory
PICCS :	On the inventory, or in compliance with the inventory
IECSC :	On the inventory, or in compliance with the inventory
TCSI :	On the inventory, or in compliance with the inventory
TSCA :	On the inventory, or in compliance with the inventory

15.2. Chemical safety assessment:

Chemical Safety Report: No information available

16. Other information

Label information:	TAG in 3D – TECHForce
Product code:	TECHForce
Reason for revision:	Updated information compliant with
OSHA (GHS) standard	
Revision Number:	2
Revision date:	21/02/2020
Print date:	21/02/2020
Recommended restrictions:	None
Disclaimer:	TAG PLASTURGIE MAKES NO WARRANTY, EXPRESS OR IMPLIED, REGARDING THE INFORMATION CONTAINED HEREIN OR ITS PRODUCTS, INCLUDING BUT NOT LIMITED TO ANY WARRANTY AS TO ACCURACY OR COMPLETENESS OF INFORMATION, OR ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. NOTICE REGARDING APPLICATION RESTRICTIONS:

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The company does not recommend any of its products, including samples, for use: (A) in any application which is intended for any internal contact with human body fluids or body tissues (B) as a critical component in any medical device that supports or sustains human life; and (C) specifically pregnant women or in any applications designed specifically to promote or interfere with human reproduction. Components of products intended for human or animal consumption.