

# SAFETY DATA SHEET

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 THE COMPANY/UNDERTAKING

### 1. Product identifier:

Product Name : TECHForce

### 1. Relevant identified uses of the substance or mixture and uses advised against:

Recommended use: 3D Printing

Uses advised against : No information available

### 1. 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

### 1.4. Emergency telephone number

France: ORFILA (INRS): +33 (0)1 45 42 59 59

Belgium: +32 02/264 96 36

## 2. HAZARDS IDENTIFICATION

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

## 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%.

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### 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:

Symptoms: None known.

4.3. Indication of any immediate medical attention and special treatment needed:

Note to doctors: Treat symptomatically.

### 5. FIRE FIGHTING MEASURES

5.1 Suitable extinguishing media: Water spray

Dry chemical

Foam

Carbon dioxide (CO<sub>2</sub>)

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

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

Further information : Minimize dust generation and accumulation.

### 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.

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### 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.

#### 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<sup>3</sup>, 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), NO<sub>x</sub>, 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.

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.

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### 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

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:

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