



## SAFETY DATA SHEET - PRO Series Tough PLA

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### Section 1: Identification of the substance and Preparation

#### 1.1: Product Identifiers

Product name: Pro Series Tough PLA

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

Identified uses: 3D printing filament. Material for 3D printing FDM applications.

#### 1.3: Details of the supplier of the Safety Data Sheet

Company identification:

MatterHackers

20321 Valencia Circle

Lake Forest, CA

92630

Email: [support@matterhackers.com](mailto:support@matterhackers.com)

Phone: +1 (949) 613-5838

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### Section 2: Hazard(s) identification

#### 2.1: Classification of the substance or mixture

This product is not classified as dangerous according to EC criteria

#### 2.2: Label elements

Appearance: Clear, translucent, opaque, monofilament in its natural state.

Color: Clear Translucent Opaque

Physical State: Solid

Solid Odor: Sweet

2.3: Other Hazards: N/A

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### **Section 3: Composition/Information on ingredients**

Description: Polyamide 12 – glass fibers – additives/modifiers --- This product is a Mixture.

Dangerous Components: N/A

Additional information:

Eye contact: Contact with eyes may cause irritation.

Skin Contact: Substance may cause slight skin irritation.

Ingestion: Ingestion may cause gastrointestinal irritation, nausea, vomiting, and diarrhea.

Inhalation: Inhalation of dust may cause shortness of breath, tightness of the chest, and a sore throat and cough. Low hazard for usual industrial or commercial handling.

Target Organ Effects: There were no target organ effects noted following ingestion or dermal exposure in animal studies.

Sensitization: Did not cause sensitization on laboratory animals

Specific Hazards: No information available

Flammability: Fine dust dispersed in air may ignite

Environmental Precautions: Not determined See Section 12 for more information.

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### **Section 4: First aid measures**

4.1: Description of first aid measures

Eye Contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician immediately.

Skin Contact: Rinse immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician. Cool skin rapidly with cold water after contact with hot polymer.

Inhalation: Move to fresh air. Call a physician immediately.

Ingestion: Drink water as a precaution. Never give anything by mouth to an unconscious person. Do not induce vomiting without medical advice. Call a physician immediately.

Notes to physician: Treat symptomatically.

4.2: Most important symptoms and effects, both acute and delayed

No further relevant information available

4.3: indication of medical attention and special treatment needed

No further relevant information available

Skin contact: Wash skin with plenty of water. With prolonged skin irritation, seek first aid or medical attention.

After contact with the molten product, cool rapidly with cool water, do not pull solidified product from the skin and seek medical treatment.

Eye contact: Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician.

Ingestion: If swallowed, seek medical attention.

4.2: Most important symptoms and effects, both acute and delayed

No further relevant information available

4.3: indication of medical attention and special treatment needed

No further relevant information available

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## **Section 5: Firefighting measures**

### 5.1: Extinguishing media

Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam.

### 5.2: Special hazards arising from the substance or mixture

Can be released in case of fire:

Carbon Monoxide (CO)

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

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## **Section 6: Accidental release measures**

### 6.1: Personal precautions, protective equipment and emergency procedures

Use self-contained breathing apparatus and protective fire fighting clothes

### 6.2: Environmental precautions

Prevent from entering into soil, ditches, sewers, waterways and/or groundwater.

### 6.3: Methods and materials for containment and cleaning up

Sweep up. Collect in suitable and properly labeled containers.

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## **Section 7: Handling and storage**

### 7.1: Precautions for safe handling

General Handling: No smoking, open flames or sources of ignition in handling and storage area. Good housekeeping and controlling of dusts are necessary for safe handling of product. Avoid breathing process fumes. Workers should be protected from the possibility of contact with molten resin. Do not get molten material in eyes, on skin or clothing. Protect against electrostatic charges

## 7.2: Conditions for safe storage, including any incompatibilities storage

Store in accordance with good manufacturing practices, in a cool place and away from direct sunlight. Protect from humidity and keep away from water.

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## **Section 8: Exposure controls/personal protection**

### 8.1: Control parameters

None established.

### 8.2: Exposure Controls:

#### Personal protection

**Eye/Face Protection:** Use safety glasses (with side shields). Safety glasses (with side shields) should be consistent with EN 166 or equivalent. If there is a potential for exposure to particles which could cause eye discomfort, wear chemical goggles. Chemical goggles should be consistent with EN 166 or equivalent. If exposure causes eye discomfort, use a full-face respirator.

**Skin Protection:** No precautions other than clean body-covering clothing should be needed.

**Hand protection:** Chemical protective gloves should not be needed when handling this material. Consistent with general hygienic practice for any material, skin contact should be minimized. Use gloves with insulation for thermal protection (EN 407), when needed. Use gloves to protect from mechanical injury. Selection of gloves will depend on the task.

**Respiratory Protection:** Not necessary if room is well ventilated.

**Ingestion:** Use good personal hygiene. Do not consume or store food in the work area. Wash hands before smoking or eating.

## Engineering Controls

Ventilation: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations.

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## Section 9: Physical and chemical properties

### 9.1: Information on basic physical and chemical properties

#### Appearance

Physical state: solid at ambient temperature

Color: Translucent/Natural/Colored

Odor: Nearly odorless

Odor threshold: N/A

pH: N/A

Melting point: 165/180°C (Glass Transition Temperature 75-80°C)

Freezing point: N/A

Boiling point: N/A

Flash point: N/A

Flammability: Autoignition at 388°C

Specific Gravity: 1.27g/cc

Solubility in water: Insoluble

Decomposition Temp: >290°C

Oxidizing properties: N/A

Explosive properties: Product is not explosive

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## Section 10: Stability and reactivity

### 10.1: Reactivity

Reacts with strong acids and oxidizing agents

## 10.2: Chemical stability

Stable

## 10.3: Possibility of hazardous reactions

Burning obnoxious and toxic fumes. Aldehydes. Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>)

## 10.4: Conditions to Avoid

No further relevant information available.

## 10.5: Incompatible Materials

Strong acids, strong oxidizing agents

## 10.6: Hazardous decomposition products

Burning obnoxious and toxic fumes. Aldehydes. Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>)

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## **Section 11: Toxicological information**

### 11.1: Information on toxicological effects

Ingestion: Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts. May cause choking if swallowed.

Aspiration hazard: Based on physical properties, not likely to be an aspiration hazard.

Dermal: No adverse effects anticipated by skin absorption.

Inhalation: No adverse effects are anticipated from single exposure to dust.

Eye damage/eye irritation: Solid or dust may cause irritation or corneal injury due to mechanical action.

Elevated temperatures may generate vapor levels sufficient to cause eye irritation.

Skin corrosion/irritation: Prolonged contact is essentially non irritating to skin. Mechanical injury only. Under normal processing conditions, material is heated to elevated temperatures; contact with the material may cause thermal burns.

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## **Section 12: Ecological information**

### 12.1: Toxicity

Not expected to be acutely toxic.

### 12.2: Persistence and degradability

Does not bioaccumulate. Inherently biodegradable

Ecotoxicity Effects: EC50/72h/algae > 1100 mg/L

### 12.3: Bioaccumulative potential

No bioconcentration is expected because of the relatively high molecular weight.

### 12.4: Mobility in soil

In the terrestrial environment, material is expected to remain in the soil.

In the aquatic environment, material will sink and remain in the sediment.

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## **Section 13: Disposal considerations**

### 13.1: Waste treatment methods

For uncontaminated material disposal options include mechanical and chemical recycling or energy recovery.

In some countries landfill is also allowed. For contaminated material the options remain the same, although additional evaluation is required. For all countries the disposal methods must be in compliance with national and provincial laws and any municipal or local by-laws. All disposal methods must be in compliance with the EU framework Directive 2008/98/EC and their subsequent adaptations, as implemented in National Laws and Regulations, as well as EU Directives dealing with priority waste streams.

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## **Section 14: Transport information**

Not Classified – not considered hazardous based on available data

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## **Section 15: Regulatory information**

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

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## **Section 16: Other information**

The information herein is based on our present knowledge and given in good faith, but no warranty, express or implied, is made.

Contact [support@matterhackers.com](mailto:support@matterhackers.com) for more information.

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