



### Section 1. Identification

Product Name: PLA++

Synonyms: None

CAS Number: None

Product Use: A polymer filament that can be used in 3D printer applications.

Manufacturer: Breathe-3DP, LLC  
Address: 14570 Industrial Park Road, Suite E, Bristol, VA 24202

General Information: Call (276) 644-4260

### Section 2. Hazards Identification

Classification of the product: No need for classification according to GHS criteria for this product.

Label elements: The product does not require a hazard warning label in accordance with GHS criteria.

Other hazards which do not result in classification:

Eyes: No significant eye irritation or eye toxicity during normal use.

Skin: No significant skin irritation. Molten polymer may cause thermal burns.

Ingestion: May cause irritation to the throat, mouth and stomach and / or may cause nausea.

Inhalation: Inhalation of process fumes and vapors may cause irritation in the respiratory system.

Chronic: No known chronic health effects

### Section 3. Composition / information on ingredients

This product contains a proprietary blend of components encapsulated within a polymer matrix. These components are not regarded as hazardous under 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200. The specific chemical identity of this product is withheld because it is trade secret information of Universal Fibers, Inc.



#### **Section 4. First Aid Measures**

Inhalation: Move to fresh air. Get immediate medical attention.

Skin contact: No adverse effects are expected from accidental skin contact. If persistent skin irritation occurs, call a physician. If skin contact with hot polymer occurs, cool the skin rapidly with cold water. Do not attempt to remove hot polymer from the skin as the skin may be easily damaged. Get medical attention if significant burns occur.

Eye contact: Rinse immediately with plenty of water for at least 15 minutes, including under the eye lids. Get immediate medical attention.

Ingestion: Drink water as a precaution. Do not induce vomiting without medical advice. Get immediate medical attention.

#### **Section 5. Fire Fighting Measures**

Suitable extinguishing media: Foam, carbon dioxide (CO<sub>2</sub>), dry chemical and water fog

Fire fighting procedures: Firefighters must wear NIOSH-approved positive pressure self-contained breathing apparatus with full-face mask and full protective clothing.

Hazardous combustion products: Burning may produce carbon monoxide, carbon dioxide, hydrocarbons and other possible irritating or toxic substances.

Unusual fire and explosion hazards: This product does not have unusual fire and explosion hazards. However, dust and fumes generated from burning of this product could present an explosion hazard.

#### **Section 6. Accidental Release Measures**

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



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

Methods for cleaning up: Clean up promptly by scoop or vacuum. Sweep up and shovel in to suitable containers for disposal.

### Section 7. Handling and Storage

Handling: Avoid excessive heat and sources of ignition. Protect from moisture and sunlight.

Storage: Store in a cool, dry, well ventilated storage area. Avoid excessive heat and sources of ignition. Protect from moisture and sunlight.

### Section 8. Exposure Controls / Personal Protection

Exposure limits: None established.

Engineering Controls: Use local exhaust ventilation and good general extraction.

Respiratory protection: Not required under normal process conditions and with adequate ventilation. However, should conditions exist that require respiratory protection, a NIOSH / MSHA approved respirator should be worn.

Eye protection: Safety glasses with side-shields or goggles.

Body protection: Impervious clothing.

Hygiene Measures: Good industrial hygiene practice should be observed by washing after use. Avoid contact with skin, eyes and clothing.

### Section 9. Physical and Chemical Properties

Appearance: Solid filament at ambient temperature

Odor: No significant odor

Boiling point: Not measured

Melting point: 150 – 180°C (302 – 356°F)

Decomposition temperature: 482°F (250°C)

Vapor pressure: No data available

Vapor density: No data available



Solubility in water: Insoluble  
Specific gravity: 1.25 g/cm<sup>3</sup>  
pH: Not applicable

#### **Section 10. Stability and Reactivity**

Chemical stability: Stable

Conditions to avoid: Avoid temperatures above 446°F (230°C). Do not store near heat, flame nor strong oxidizing agents, acids or bases. Minimize dust generation and accumulation.

Hazardous decomposition products: Carbon monoxide, carbon dioxide, hydrocarbons and other possible toxic substances can be generated during thermal decomposition and combustion.

Hazardous polymerization: Does not occur.

#### **Section 11. Toxicological Information**

No data available.

#### **Section 12. Ecological Information**

Ecotoxicity: No information available.  
Persistence and degradability: No information available.  
Bioaccumulative potential: No information available.

#### **Section 13. Disposal Considerations**

Dispose of this product in accordance with local, state and federal regulations.

#### **Section 14. Transport Information**

U.S. Department of Transportation (DOT): This product is not regulated for transport.

#### **Section 15. Regulatory Information**



U.S. Toxic Substances Control Act (TSCA): All the component(s) comprising this product are either exempt or listed on the TSCA inventory.

SARA Title III, Section 313: This product does not contain any components that exceed the threshold reporting levels established by SARA Title III, Section 313.

#### **Section 16. Other Information**

Revision Indicator: SDS Revision # 2 / Issued 09/03/2015

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