



## MATERIAL SAFETY DATA SHEET

PROTO-PASTA HIGH TEMPERATURE PLA

DOC VERSION: 1

PRINT DATE: 03/01/2016

REV DATE:

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### SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

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**PRODUCT NAME:** Proto-pasta High Temperature PLA  
**SYNONYMS:** Proto-pasta HTPLA  
**PRODUCT CODES:** HTP2XXXX-XXX

**RECOMMENDED USE:** For use in 3D printers at recommended temperatures

**MANUFACTURER:** Proto Plant  
**ADDRESS:** 5601 East 18Th Street #102  
Vancouver, WA 98661

**EMERGENCY PHONE:** 503-877-5268  
**OTHER CALLS:** 503-877-5268  
**HOME PAGE:** [www.protoplant.com](http://www.protoplant.com)

**CONTACTS:** Dustin Cram – Chief Engineer                      [dustin@protoplant.com](mailto:dustin@protoplant.com)

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### SECTION 2: HAZARDS IDENTIFICATION

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#### EMERGENCY OVERVIEW:

This is a polymeric compound. All ingredients are encapsulated by the polymer and present no likelihood of exposure under normal conditions of processing and handling.

#### GHS-US CLASSIFICATION

This product is not classified under GHS

**SIGNAL WORD:** NONE  
**HAZARD STATEMENT:** NONE  
**PRECAUTIONARY STATEMENT:** NONE

#### HAZARDS THAT DO NOT RESULT IN CLASSIFICATION

**EYES:** Solid/dust may cause irritation due to mechanical action. Dust will not be generated under normal use conditions.

**SKIN:** Filament is not likely to cause irritation.  
Contact with molten material may cause thermal burns.

**BURNS:** Molten material will cause thermal burns, avoid contact.

**INHALATION:** Processing fumes may cause irritation to the respiratory tract, use in well ventilated areas only.

**CHRONIC HEALTH HAZARDS:** None known for this compound.



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**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

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<b>INGREDIENTS</b>	<b>CAS NO.</b>	<b>% WT</b>
Poly lactide resin	9051-89-2	>98
Colorant	N/A	<2

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**SECTION 4: FIRST AID MEASURES**

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**EYES:**

First Aid not likely required. Flush with water. Consult physician if symptoms persist.

**SKIN:**

Wash with soap and water. For thermal burns, immediately flush with cold water. Do not attempt to remove polymer from skin. Obtain medical attention.

**INGESTION:**

Obtain immediate medical attention. For a poison emergency in the U.S. call 1-800-222-1222.

**INHALATION:**

Leave exposed area and seek fresh air. If irritation persists, seek medical attention.

**NOTES TO PHYSICIANS OR FIRST AID PROVIDERS:**

Treat symptomatically.

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**SECTION 5: FIRE-FIGHTING MEASURES**

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**FLAMMABILITY CLASS:** 1

**EXTINGUISHING MEDIA:**

Foam. Water. Carbon Dioxide (CO<sub>2</sub>). Dry Chemical. Alcohol resistant foams are preferred if available. General purpose synthetic foams (including AFFF) or protein foams may function, but much less effectively.

**UNSUITABLE EXTINGUISHING MEDIA:**

None Known

**SPECIAL FIREFIGHTING PROCEDURES:**

Persons exposed to products of combustion should wear NIOSH approved self contained breathing apparatus and full protective equipment.

**UNUSUAL FIRE & EXPLOSION HAZARDS:**

This compound has no unusual fire or explosion hazards.

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**SECTION 6: ACCIDENTAL RELEASE MEASURES**

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**PERSONAL PRECAUTIONS:**

Sweep up scrap and store material neatly to prevent slipping hazard.



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### ENVIRONMENTAL PRECAUTIONS:

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

### METHODS FOR CLEANING UP:

Cut filament into short pieces to prevent tripping. Dispose of in suitable containers.

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## SECTION 7: HANDLING AND STORAGE

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### PRECAUTIONS:

Proper purging and shut down procedures should be followed to avoid overheating of this compound. Use only at recommended printing temperatures. Product as shipped is not a combustible dust.

### HANDLING AND STORAGE:

Store in a cool, dry place. Product as shipped is not a combustible dust. Mechanical handling can cause the formation of dusts. To reduce the risk for dust explosion do not permit dust to accumulate.

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## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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### ENGINEERING CONTROLS:

Ensure adequate ventilation on workstation. Avoid dust build up.

### VENTILATION:

Local exhaust is preferred.

### RESPIRATORY PROTECTION:

A NIOSH approved respirator is recommended for protection against processing fumes, or from dust generated from grinding, sanding, or sawing operations.

### EYE PROTECTION:

Safety glasses with side shields are recommended.

### SKIN PROTECTION:

Impervious clothing. For prolonged handling, canvas or cotton gloves are recommended.

### WORK HYGIENIC PRACTICES:

Wash hands and dry hands thoroughly before and after handling product.

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## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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**APPEARANCE:** Smooth, thin strand

**ODOR:** Light sweet odor during processing, no odor at room temperature

**ODOR THRESHOLD:** Not determined

**pH:** Not Applicable

**MELTING RANGE:** 150C-180C

**BOILING POINT/RANGE:** Not applicable



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**FLASH POINT:** Not Determined

**EVAPORATION RATE:** Not determined

**FLAMMABILITY:** Combustible if heated

**UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS:** Not Determined

**VAPOR PRESSURE:** Not Determined

**VAPOR DENSITY:** Not Determined

**DENSITY:** 1.24 g/cc

**WATER SOLUBILITY:** Insoluble

**SOLUBILITY IN OTHER SOLVENTS:** Not determined

**PARTITION COEFFICIENT: N-OCTANOL/WATER:** Not Determined

**AUTO-IGNITION TEMPERATURE:** 300C-400C

**DECOMPOSITION TEMPERATURE:** 482F (250C)

**VISCOSITY:** Not applicable

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### SECTION 10: STABILITY AND REACTIVITY

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**REACTIVITY:** Stable when stored as recommended

**CONDITIONS TO AVOID:** Temperatures above 446F (230 °C).

**MATERIALS TO AVOID:** Oxidizing agents. Strong bases.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Burning produces obnoxious and toxic fumes. Aldehydes. Carbon monoxide (CO). carbon dioxide (CO<sub>2</sub>).

**Polymerization:** Not applicable

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### SECTION 11: TOXICOLOGICAL INFORMATION

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**PRINCIPLE ROUTES OF EXPOSURE:** Eye contact, Skin contact, Inhalation, Ingestion.

**ACCUTE TOXICITY:** None Known

**SKIN CORROSION/IRRITATION:** Contact with dust/fumes may cause irritation

**SERIOUS EYE DAMAGE/IRRITATION:** Contact with dust/fumes may cause irritation

**RESPIRATORY OR SKIN SENSITIZATION:** None Known



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**GERM CELL MUTAGENICITY:** Not Determined

**CARCINOGENICITY:** None Known

**REPRODUCTIVE TOXICITY:** Not Determined

**STOT-SINGLE EXPOSURE:** Not Determined

**STOT-SINGLE EXPOSURE:** Not Determined

**ASPITIATION HAZARD:** None Known

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### SECTION 12: ECOLOGICAL INFORMATION

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**ECOTOXICITY EFFECTS:** Not Determined

**DEGRADABILITY AND PERSISTENCE:** Not Determined

**BIOACCUMULATIVE POTENTIAL:** Not Determined

**MOBILITY IN SOIL:** Not Determined

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### SECTION 13: DISPOSAL CONSIDERATIONS

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**WASTE DISPOSAL METHOD:** In accordance with local and national regulations. Do not contaminate ponds, waterways or ditches with chemical or used container. For recycling, contact local waste disposal centers.

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### SECTION 14: TRANSPORT INFORMATION

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**SECTION 14 NOTES:** Not regulated under the US Department of Transportation.

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### SECTION 15: REGULATORY INFORMATION

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**This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right To Know Act of 1986 and of 40 CFR 372: NONE**

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### SECTION 16: OTHER INFORMATION

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