



## **SAFETY DATA SHEET**

In accordance with paragraph (d) of 29 CFR 1910.1200:2012  
Regulation (EU) No. 1907/2006,

### **Section 1. Chemical Product and Company identification**

**Product Name:** KODAK 3D Printing Filament PLA tough

**Importer:** Smart International Inc.  
2035 Sunset Lake Road  
Newark, Delaware 19702  
USA.  
Email: support@smart3d.tech  
USA Emergency Poison Control Hot Line (24/7):  
1 (800) 222-1222 or call your LOCAL POISON CONTROL  
CENTER.

### **Section 2. Hazards Identification**

**GHS Classification:** Not applicable

#### **GHS label elements**

**Hazard symbols:** None needed.  
**Signal word:** None needed.  
**Hazard statement:** None needed.

#### **Precautionary statements**

**Prevention:** None needed.  
**Response:** None needed.  
**Storage:** None needed.

#### **EU Classification**

##### **Classification of substance or mixture:**

**REGULATION (EC) No 1272/2008**

This product is not classified as dangerous according to EC criteria.

##### **Disposal**

Dispose of contents/container in accordance with local/regional/national/international regulation.

##### **OSHA Regulatory Status**

This product is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

##### **Other hazards which do not result in classification:**

NFPA rating: (0-4 steps) Health=1, Flammability=0, Reactivity=0



### **Section 3. Composition**

Chemical name: Polylactic Acid  
Chemical Family: Polymer, thermoplastic copolymer.  
Product Use: Monofilament for FFF 3D Printing

Chemical name	CAS n./ECL n./EINECS n.	Contents (%)
Poly lactide resin	9051-89-2	>85

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

#### **Skin Contact:**

It is unlikely that first aid shall be needed. In case of contamination, rinse skin with running water. Molten material may cause thermal burns. Get medical attention when in case of burn or skin irritation.

#### **Inhalation**

Heating may release irritating fumes. Move exposed person to fresh air keep at rest in a comfortable position. Drink water to clean the throat and blow nose to remove the dust. Get medical advice.

#### **Eye Contact**

It is unlikely that first aid shall be needed. In case of dust in the eyes, rinse immediately eyes with plenty of water at least 15 minutes. If irritation persists, get medical advice from and ophthalmologist.

#### **Ingestion**

Not likely due to nature of product. It is unlikely that first aid shall be needed. The product is not considered toxic. Drink plenty of water. It may cause gastrointestinal blockage, get medical advice.

#### **Notice to Physician**

It is unlikely that first aid shall be needed if the product is used under ordinary conditions. Treat symptomatically according to victim's conditions and specifics of incident.

#### **Antidote**

None known. Treat symptomatically and supportively.

### **Section 5. Fire-fighting Measures**

#### **Flammability:**

Autoignition temperature: Not available.



### **Suitable extinguishing media**

Water, foam, regular dry chemical, carbon dioxide 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.

### **Specific hazards arising from the chemical**

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**

Carbon monoxide, Carbon dioxide, Hydrogen cyanide (HCN). Levels of fire hazard: Not available.

### **Fire fighting procedures and equipments**

Wear appropriate personal protective equipment (see section 9. EXPOSURE CONTROLS/PERSONAL PROTECTION).

Avoid inhalation of smoke or gas when fire fighting. Use self contained breathing apparatus (SCBA) for protection against possible exposure.

Isolate hazard area and deny entry. Stay upwind and keep out of low areas. Move container from fire area if it can be done without risk.

Cool containers with water until well after fire is out.

### **Special Protective Equipment and Precautions for Firefighters**

Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

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

### **Personal Precautions, Protective Equipment and Emergency procedures**

Perform in accordance with section 9. EXPOSURE CONTROLS/PERSONAL PROTECTION. Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

### **Methods and Materials for Containment and Cleaning Up**

Where possible allow leak of molten material to solidify before disposal in an appropriate container. Dispose in accordance with all applicable regulations.

### **Environmental Precautions**

Avoid dispersal of spilt material and runoff and contact with waterways, drains, sewers and basements or confined areas. If large spills, advise emergency services. Comply with all applicable regulations on spill and release reporting.

## **Section 7. Handling and Storage**

### **Handling**

Keep away from the molten plastic while printing in case of being burned.



### Storage

Store at temperatures not exceeding 50°C/122°F. Keep cool. Avoid heat, flames, sparks and other sources of ignition. Keep away from incompatible materials.

### Incompatible Materials

Oxidizing agents.

## **Section 8. Exposure Controls & Personal Protection**

### Component Exposure limit

Exposure limit under ISHL Not applicable

ACGIH Not applicable

Biological exposure limits Not applicable

### EU - Occupational Exposure (98/24/EC) - Binding Biological Limit Values and Health

#### Surveillance Measures

There are no biological limit values for any of this product's components.

#### Engineering Controls

A system of local and/or general exhaust ventilation system is recommended to keep exposure below the Exposure Limits. Local exhaust ventilation is considered sufficient to effectively remove emissions (dusts and fumes) of the contaminant at its source, preventing dispersion during handling or thermal processing.

### Personal Protective Equipment

#### Respiratory Protection

No respirator is required under normal conditions of use. Under conditions of frequent use or heavy exposure, Respiratory protection may be needed.

#### Eye/face/skin Protection

None during normal use. Protect against molten solid by wearing protective gloves.

## **Section 9. Physical & Chemical Properties**

Appearance:	Monofilament, spool
Physical State:	Solid
Odor:	Sweet
pH:	Not available
Freezing point:	Not available



Melting point:	165-180°C
Glass Transition point:	55-60°C
Initial Boiling Point/Boiling Ranges:	Not available
Evapourating Rate:	Not available
Flammability (solid, gas):	Not available
Upper/Lower Flammability or explosive limits:	Not available
Vapour pressure:	Not available
Solubility:	Insoluble
Vapour density (Air=1):	Not available
Relative density:	1.22
Partition coefficient of n-octanol/water:	Not available
Decomposition Temperature:	Not available
Molecular weight:	Not available

## **Section 10. Stability & Reactivity**

### **Reactivity/Stability**

This product is chemical stable under recommended storage, handling, use and temperature conditions.

### **Possibility of Hazardous Reaction**

Will not polymerize.

### **Conditions to Avoid**

Avoid contact with heat above 230°C (446°F), sparks, flame or other ignition sources. Avoid keeping resin molten for excessive periods of time at elevated temperatures. Prolonged exposure will cause polymer degradation.

### **Materials to Avoid**

Strong oxidizing agents.

### **Hazardous Decomposition Products**

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

## **Section 11. Toxicological Information**

Information on the likely routes of exposure



**Inhalation:**

No data available. Not expected to be harmful. Dust may cause irritation of the upper respiratory tract.

**Ingestion:**

No data available. Not expected to be harmful.

**Eye/Skin:**

No data available. Not expected to be harmful.

**Genotoxicity:**

No data available. Not expected to be harmful.

**Medical Conditions Aggravated by Exposure**

No data available. Not expected to be harmful.

**Section 12. Ecological Information**

**Ecotoxicity**

No data available.

**Persistence and Degradability**

No data available.

**Bioaccumulative Potential**

No data available.

**Mobility**

No data available.

**Section 13. Disposal Considerations**

**Disposal methods**

Dispose of contents/container in accordance with applicable local, regional, national, and/or international laws and regulations. Avoid release to the environment. Incineration should be done in accordance with prevailing municipal, state, and federal laws and standards from local environmental agencies.

**Section 14. Transport Information**

**US DOT Information**

UN/NA number: Not regulated for transport of dangerous goods

Proper shipping name: None

Hazard class: Not applicable

Packing group: None

**IMDG:**



UN/Id No.: Not regulated for transport of dangerous goods  
Proper shipping name: None  
Hazard class: Not applicable  
Packing group: None

ICAO/IATA:  
UN-No.: Not regulated for transport of dangerous goods  
Proper shipping name: None  
Hazard Class: Not applicable.  
Packing group: None

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

U.S. Federal Regulations  
SARA 313 Not listed  
TSCA Inventory List: Listed

STATE REGULATIONS  
California Proposition 65: Not listed

INTERNATIONAL INVENTORIES  
Canada DSL Inventory List: Listed  
REACH/EU EINECS List: Components are in compliance with  
and/or are listed.  
Japan (ECL): Listed  
Australia (AICS): Listed  
Korean chemical inventory: Listed  
China inventory of existing chemical substances list: Listed

Issue date: 2017. 10. 28

### **Disclaimer**

This SDS, based on current knowledge and experience, contains a general summary of hazards and is consistent with the information provided by the supplier. No liability can be assumed for the accuracy and completeness of this information.

The information in this SDS applies for this specific material only. It therefore does not apply for its usage in combination with other materials or ways of processing.

It is user's responsibility to read and understand this information and incorporate it into individual safety programs, according to all legal and regulatory applicable procedures.

Smart International gives no warranty whatsoever, including the warranties of merchantability or of fitness for a particular purpose. Any product purchased is sold on the assumption the user shall determine the quality and suitability of the product.



Smart International expressly disclaims any and all liability for incidental, consequential or any other damages arising out of the use or misuse of this product. No information provided shall be deemed to be a recommendation to use any product in conflict with any existing patent rights.