

Section 1. Product and company identification

1.1 Identification of the material: PolyCast™ 3D printing filament

1.2 Identified Uses: used primarily for extrusion-based 3D printing processes

1.3 Manufacturer information

Manufacturer: JF Polymers (Suzhou) Co. Ltd.

Address:

Haicheng Industrial Park

Building 7

Changshu Economic and Technological Zone (CEDZ)

Changshu, Suzhou, Jiangsu Province, 215513

China

Tel/Fax: +86-512-52096516 / +86-512-52096512

1.4 Emergency contact number

Emergency telephone number: +86-512-52096516; or call LOCAL POISON CONTROL CENTER

Section 2. Hazards identification

2.1 Classification of the substance of mixture

2.1.1 Classification according to Directive 67/548/EEC or 1999/45/EC as amended

This substance does not meet the criteria for classification according to Directive 67/548/EEC as amended.

2.1.2 Classification according to Regulation (EC) No 1272/2008 as amended

This substance does not meet the criteria for classification according to Regulation (EC) 1272/2008 as amended.

2.2 Label elements

Not applicable.

2.3 Other hazards

Not likely to be an irritant in the solid form. Danger of burns when heated/molten material is handled.

Section 3. Composition/information on ingredients

3.1 Substances

Chemical Name	CAS No.	Weight %	Exposure Limits
Poly(vinyl butyral)	68648-78-2	> 50%	None

Section 4. First aid measures

4.1 Description of first aid measures

4.1.1 Inhalation: Move to fresh air. Call a physician immediately if irritation persists.

4.1.2 Skin contact: Rinse immediately with plenty of water. If skin irritation persists, call a physician. Cool skin rapidly with cold water after contact with hot polymer.

4.1.3 Eye contact: Rinse immediately with plenty of water. Call a physician immediately.

4.1.4 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.

4.2 Most important symptoms and effects, both acute and delayed

Burns resulted from contacting or handling heated/molten materials

4.3 Indication of any immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically.

Section 5. Fire-fighting measures

5.1 Suitable extinguishing media

Use fire-extinguishing media appropriate for surrounding materials. Do not use a solid water stream as it may scatter and spread fire.

5.2 Special hazards arising from the substance or mixture

During fire, gases hazardous to health may be formed.

5.3 Advice for fire fighters

Follow the general fire precautions indicated in the workplace. Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Use standard firefighting procedures and consider the hazards of other involved materials.

Section 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear gloves when handling hot melt of material.

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 and materials for containment and cleaning up

Shovel into suitable container for disposal.

Section 7. Handling and storage

7.1 Precautions for safe handling

Avoid prolonged contact with skin and eyes. Avoid dust formation. Workers should be protected from the possibility of contact with molten material. Low hazard for usual industrial or commercial handling.

7.2 Conditions for safe storage

Store in ambient temperatures. Avoid exposure to high moisture levels. No special restrictions on storage with other products.

Section 8. Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

UK. EH40 Workplace Exposure Limits (WELs)

Components	Type	Value	Form
Dust (CAS -)	TWA	4 mg/m ³	Respirable dust
		10 mg/m ³	Inhalable dust

Biological limit values: No biological exposure limits noted for the ingredient(s)

Recommended monitoring procedures: Not available

Derived no-effect level (DNEL): Not available

Predicted no effect concentrations (PNECs): Not available

8.2 Engineering controls

Provide appropriate exhaust ventilation at places where dust is formed or the material is molten, such as during printing.

8.3 Personal protective equipment

Wear gloves when handling hot/molten material.

Section 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance: Filament, Solid

Color: White

Odor: Odorless

Odor threshold: Not available

pH: Not applicable

Melting point/freezing point: 135 – 210 °C

Boiling point: Not applicable

Flash point: Not applicable

Evaporation rate: Not applicable

Flammability: Not available

Upper/lower flammability or explosive limits: Not available

Vapor pressure: Not applicable

Vapor density: Not applicable

Relative density: 1.1 (20 °C) Approximate

Solubility: Soluble in alcohols

Partition coefficient (n-octanol/water): No data available

Auto-ignition temperature: > 380 °C

Decomposition temperature: Not available

Viscosity: Not applicable

Section 10. Stability and reactivity

10.1 Reactivity

Stable at normal conditions.

10.2 Chemical stability

Material is stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous polymerization does not occur.

10.4 Conditions to avoid

Avoid extreme heat. Avoid all sources of ignition: heat, sparks, open flames, etc.

10.5 Incompatible materials

Strong oxidizing agents. Strong acids.

10.6 Hazardous decomposition products

Carbon oxides

Section 11. Toxicological information

11.1 Likely routes of exposure

Inhalation: Dust irritates the respiratory system, and may cause coughing and difficulties in breathing.

Skin contact: Dust may irritate skin.

Eye contact: Dust may irritate the eyes.

Ingestion: May cause discomfort if swallowed.

11.2 Symptoms

Dust may irritate throat and respiratory system and cause coughing. Direct contact with eyes may cause temporary irritation.

11.3 Information on toxicological effects

Acute toxicity: Dusts may irritate the respiratory tract, skin and eyes.

Skin corrosion/irritation: Dust may irritate skin.

Serious eye damage/eye irritation: Dust may irritate the eyes. Exposed may experience eye tearing, redness, and discomfort.

Respiratory sensitization: Not classified.

Skin sensitization: Not a skin sensitiser.

Germ cell mutagenicity: Not expected to be mutagenic.

Carcinogenicity: Not classified.

Reproductive toxicity: Not classified.

Specific target organ toxicity - single exposure: No data available

Specific target organ toxicity - repeated exposure: No data available

Aspiration hazard: Due to the physical form of the product it is not an aspiration hazard.

Mixture versus substance information: Not applicable.

Other information: Pre-existing skin and respiratory conditions including dermatitis, asthma and chronic lung disease might be aggravated by exposure.

Section 12. Ecological information

12.1 Toxicity

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

12.2 Persistence and degradability

No data available.

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

Not available

12.5 Other adverse effects

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Section 13. Disposal considerations

13.1 Waste treatment methods

In accordance with local and national regulations. Do not contaminate ponds, waterways or ditches with chemical or used container. Contact manufacturer if needed.

Section 14. Transport information

ADR

Not regulated as dangerous goods.

RID

Not regulated as dangerous goods.

ADN

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

This substance/mixture is not intended to be transported in bulk.

Section 15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture EU regulations**Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I**

Not listed.

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex II

Not listed.

Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 1 as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 2 as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 3 as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry

Not listed.

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA

Not listed.

Authorisations**Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorisation, as amended**

Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended

Not listed.

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work

Not listed.

Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding

Not listed.

Other EU regulations

Directive 96/82/EC (Seveso II) on the control of major-accident hazards involving dangerous substances

Not listed.

Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Not listed.

Directive 94/33/EC on the protection of young people at work

Not listed.

Other regulations

This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006.

National regulations: Not available.

15.2 Chemical safety assessment

No Chemical Safety Assessment has been carried out.

Section 16. Other information

Revision information

Date of this revision: Oct 24, 2016

Declare to reader

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. This shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.