

PolyMax™ PC

SDS number: C51520170704

Section 1: Product and company identification**1. Identification of the material**

PolyMax™ PC 3D printing filament

2. Identified Uses

Used primarily for extrusion-based 3D printing processes

3. Manufacturer informationManufacturer:

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

4. Emergency contact numberEmergency telephone number:

+86-512-52096516; or call LOCAL POISON CONTROL CENTER

Section 2: Hazards identification**1. Classification of the substance of mixture****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.

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. Label elements

Not applicable.

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

1. Substances

Chemical Name	CAS No.	Weight (%)	Exposure Limits
Polycarbonate	25037-45-0	70.0% - 90.0%	None

1. Description of first aid measures

Section 4: First aid measures

1.1. Inhalation

Move exposed person to fresh air. Keep person warm and at rest. Get medical attention if symptoms occur. Loosen tight clothing such as a collar, tie, belt or waistband.

1.2. Skin contact

Molten material can cause severe burns. Do NOT try to peel molten polymer from the skin. Cool rapidly with water. Wash with soap and water. Get medical attention if symptoms occur.

1.3. Eye contact

Particles or fibers may cause slight discomfort similar to getting dust in the eye. Remove particles by irrigating with eye wash solution or clean water, holding the eyelids apart. Check for and remove any contact lenses. Get medical attention if irritation occurs.

1.4. Ingestion

Wash out mouth with water. Move exposed person to fresh air. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person.

2. Most important symptoms and effects, both acute and delayed

Burns resulted from contacting or handling heated/molten materials

3. Indication of any immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically.

Section 5: Fire-fighting measures

1. Suitable extinguishing media

SMALL FIRE: Use dry chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

2. Special hazards arising from the substance or mixture

No specific hazard.

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. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6: Accidental release measures

1. Personal precautions, protective equipment and emergency procedures

Lab coat. Impervious gloves. Safety glasses with side shields.

2. Environmental precautions

Collect product for recovery or disposal. Notify applicable government authority if release is reportable or could adversely affect the environment.

3. Methods and materials for containment and cleaning up

If emergency personnel are unavailable, carefully scoop up spilled materials and use a non-sparking or explosion-proof means to transfer material to an appropriate container for disposal by incineration.

Section 7: Handling and storage

1. Precautions for safe handling

Use normal good industrial hygiene and housekeeping practices. Take precautionary measures against static discharges. Take precautionary measures against static discharges.

2. Conditions for safe storage

Store in a cool, dry, well-ventilated area. Keep away from heat, sparks and flames. Keep containers closed. Avoid moisture contamination. Transferring dry pellets or granules between containers or charging into solvents can cause a build-up of static electricity which can be sufficient to cause fires and/or explosions in the presence of flammable materials. Equipment should provide a means of dissipating any charges that may develop.

Section 8: Exposure controls/personal protection

1. Control parameters

Consult local authorities for acceptable exposure limits.

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

2. Engineering controls

Use local exhaust ventilation to maintain airborne concentrations below the TLV. Suitable respiratory equipment should be used in cases of insufficient ventilation or where operational procedures demand it. For guidance on engineering control measures refer to publications such as the ACGIH current edition of 'Industrial Ventilation, a manual of Recommended Practice.

3. Personal protective equipment

Eyes:

safety glasses with side-shields

Skin:

lab coat

Respiratory:

Wear appropriate respirator when ventilation is inadequate.

Hands:

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Personal protective:

equipment



Section 9: Physical and chemical properties

1. Information on basic physical and chemical properties

Appearance: Filament, Solid

Color: different according to coloration

Odor: Slight odor

Odor threshold: Not available

Softening point: 110 – 150 °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: 1.2 – 1.3 g/cm³

Water Solubility: Insoluble

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

Auto-ignition temperature: 454 °C

Decomposition temperature: Onset of decomposition > 380 °C

Viscosity: Not applicable

Section 10: Stability and reactivity

1. Reactivity

The product is stable.

2. Chemical stability

Material is stable under normal conditions.

3. Possibility of hazardous reactions

Hazardous polymerization does not occur.

4. Conditions to avoid

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

5. Incompatible materials

Not available

6. Hazardous decomposition products

Unlikely under normal industrial use. If the product is heated to temperatures excessively higher than those recommended on the technical data sheet, thermal decomposition is possible. Combustion products may include: carbon oxides (CO, CO₂).

Section 11: Toxicological information

1. Likely routes of exposure

Inhalation:

Non-irritating to the respiratory system.

Skin contact:

Non-irritating. Molten polymer will adhere to skin causing deep thermal burns.

Eye contact:

May cause physical abrasion in contact with eyes. Molten polymer will cause serious burns to the eyes.

Ingestion:

Not hazardous in normal industrial use.

2. Symptoms

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

3. Information on toxicological effects

Acute toxicity: Not available.

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 sensitizer.

Germ cell mutagenicity: Not expected to be mutagenic.

Carcinogenicity: The ingredients of this product are not classified as carcinogenic by ACGIH or IARC, not regulated as carcinogens by OSHA, and not listed as carcinogens by NTP.

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

1. Toxicity

Fishes: Not available.

Algae: Not available.

2. Persistence and degradability

No data available.

3. Bioaccumulative potential

No data available.

4. Mobility in soil

Not available.

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

1. Waste treatment methods

Dispose of waste in accordance with applicable local, regional and international regulations and standards. Do not exceed 1mg/L in a river which the waste liquid flow into when it is disposed of from a drain as water solution. Also, it should be diluted with water by at least 20 times when disposed of. It can be disposed of as water solution in a day with maximum 2kg as itself.

Section 14: Transport information

ADR: Not regulated as dangerous goods.

RID: Not regulated as dangerous goods.

AND: 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

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.

Authorizations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, 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.

2. Chemical safety assessment

No Chemical Safety Assessment has been carried out.

Section 16: Other information

Revision information

Date of this revision: July 04, 2017

Declare to reader

During handling and use, product can cause static discharge. In the presence of flammable materials, a fire and/or explosion may occur. Molten material may cause thermal eye burns. Molten material may cause thermal skin burns. Processing vapors may cause respiratory tract irritation.