



# SAFETY DATA SHEET

## 1. Identification

**JF Polymers (Suzhou) Co. Ltd**  
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**(CEDZ)**  
**Changshu, Jiangsu Province 215513**  
**China**

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+86- 512-52096516  
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**Product Name:** PolyMax™ PC-FR  
**Chemical Family:** Thermoplastic Polymer  
**Use:** 3D Printing Filament

## 2. Hazards Identification

### GHS Classification

This product is not hazardous in the form in which it is shipped by the manufacturer.

### GHS Label Elements

Signal word: Warning

Hazard statements: If fine particles are generated during further processing, handling or by other means, product may form combustible dust concentrations in air.

## 3. Composition/Information on Ingredients

### Hazardous Components

There are no hazardous components above the relevant concentration limits according to OSHA HazCom 2012.

## 4. First Aid Measures

### Most Important Symptom(s)/Effect(s)

**Acute:** Contact with heated material can cause thermal burns., Gases and fumes evolved during the thermal processing or decomposition of this material may irritate the eyes, skin or respiratory tract.

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**Eye Contact**

In case of contact, flush eyes with plenty of lukewarm water.

**Skin Contact**

Cool melted product on skin with plenty of water. Do not remove solidified product. Get medical attention if thermal burn occurs.

**Inhalation**

Move to fresh air in case of accidental inhalation of dust or fumes from overheating or combustion.

**Ingestion**

Get medical attention.

**5. Firefighting Measures**

**Suitable Extinguishing Media:** Water fog, Dry chemical, Carbon dioxide (CO<sub>2</sub>), Foam

**Unsuitable Extinguishing Media:** High Pressure Water Streams

**Fire Fighting Procedure**

Firefighters should be equipped with self-contained breathing apparatus to protect against potentially toxic and irritating fumes.

**Hazardous Decomposition Products**

By Fire and Thermal Decomposition: ; Phenol Carbon oxides, Hazardous decomposition products due to incomplete combustion

**Unusual Fire/Explosion Hazards**

Toxic and irritating gases/fumes may be given off during burning or thermal decomposition. 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.

**6. Accidental Release Measures****Spill and Leak Procedures**

If molten, allow material to cool and place into an appropriate marked container for disposal. Sweep up and shovel into suitable containers for disposal. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture as they are released into the atmosphere in sufficient concentrations. Avoid dispersal of dust in the air (e.g., cleaning dust from surfaces with compressed air).

**7. Handling and Storage****Handling/Storage Precautions**

Handle in accordance with good industrial hygiene and safety practices. Wash thoroughly after handling. Minimize dust generation and accumulation. Routine housekeeping should be instituted to ensure that dust does not accumulate on surfaces. Solid particulate can generate electrical charging during operations such as unloading from containers and pneumatic transfer. Provide adequate precautions, such as electrical grounding and bonding, where conductive equipment is involved.

**Storage Period:**

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None.

**Storage Temperature**

**Maximum:** 49 °C (120.2 °F)

**Storage Conditions**

Containers should be tightly closed to prevent contamination with foreign materials and moisture.

**Substances to Avoid**

None known.

**8. Exposure Controls/Personal Protection**

The recommendations in this section should not be a substitute for a personal protective equipment (PPE) assessment performed by the employer as required by 29 CFR 1910 Subpart I.

**Exposure Limits**

Country specific exposure limits have not been established or are not applicable

Any component which is listed in section 3 and is not listed in this section does not have a known ACGIH TLV, OSHA PEL or supplier recommended occupational exposure limit.

**Industrial Hygiene/Ventilation Measures**

General dilution and local exhaust as necessary to control airborne vapors, mists, dusts and thermal decomposition products below appropriate airborne concentration standards/guidelines, especially during cutting, grinding and high heat operations.

**Respiratory Protection**

Although no exposure limit has been established for this product, the OSHA PEL for Particulates Not Otherwise Regulated (PNOR) of 15 mg/m<sup>3</sup> - total dust, 5 mg/m<sup>3</sup> - respirable fraction is recommended. In addition, the ACGIH recommends 3 mg/m<sup>3</sup> - respirable particles and 10 mg/m<sup>3</sup> - inhalable particles for Particles (insoluble or poorly soluble) Not Otherwise Specified (PNOS)., In the event that these limits are exceeded, an air purifying respirator (APR) equipped with particulate (P100) cartridges is recommended.

**Hand Protection**

Ensure gloves remain in good condition during use and replace if any deterioration is observed.

Wear heat resistant gloves when handling molten material.

**Eye Protection**

Safety glasses with side-shields

**Skin Protection**

No special skin protection requirements during normal handling and use.

**Additional Protective Measures**

Employees should wash their hands and face before eating, drinking, or using tobacco products. Educate and train employees in the safe use and handling of this product. Purgings should be collected as small flat thin shapes or thin strands to allow for rapid cooling.

## 9. Physical and Chemical Properties

<b>State of Matter:</b>	solid
<b>Appearance:</b>	pellets
<b>Color:</b>	Natural
<b>Odor:</b>	Odorless
<b>Odor Threshold:</b>	No Data Available
<b>pH:</b>	No Data Available
<b>Melting Point:</b>	220 °C (428 °F)
<b>Boiling Point:</b>	No Data Available
<b>Flash Point:</b>	320 °C (608 °F)
<b>Evaporation Rate:</b>	No Data Available
<b>Flammability:</b>	No Data Available
<b>Lower Explosion Limit:</b>	No Data Available
<b>Upper Explosion Limit:</b>	No Data Available
<b>Vapor Pressure:</b>	not applicable
<b>Vapor Density:</b>	No Data Available
<b>Density:</b>	not applicable
<b>Relative Vapor Density:</b>	No Data Available
<b>Specific Gravity:</b>	Approximately 1.11
<b>Solubility in Water:</b>	practically insoluble
<b>Partition Coefficient: n-octanol/water:</b>	No Data Available
<b>Auto-ignition Temperature:</b>	> 450 °C (> 842 °F)
<b>Decomposition Temperature:</b>	>= 380 °C (716 °F)
<b>Softening point:</b>	130 - 160 °C (266 - 320 °F)
<b>Dynamic Viscosity:</b>	not applicable
<b>Kinematic Viscosity:</b>	No Data Available
<b>Bulk Density:</b>	600 - 700 kg/m <sup>3</sup>
<b>Self Ignition:</b>	not applicable

## 10. Stability and Reactivity

### Hazardous Reactions

Hazardous polymerisation does not occur.

### Stability

Stable

### Materials to Avoid

None known.

### Conditions to Avoid

Generation of dust clouds.

### Hazardous Decomposition Products

By Fire and Thermal Decomposition: Phenol; Carbon oxides, Hazardous decomposition products due to incomplete combustion

## 11. Toxicological Information

<b>Likely Routes of Exposure:</b>	Inhalation Skin Contact Eye Contact
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**Health Effects and Symptoms**

**Acute:** Contact with heated material can cause thermal burns., Gases and fumes evolved during the thermal processing or decomposition of this material may irritate the eyes, skin or respiratory tract.

**Toxicity Data for: MAKROLON 1899 000000**

No data available for this product.

**Carcinogenicity:**

No carcinogenic substances as defined by IARC, NTP and/or OSHA

**12. Ecological Information****Ecological Data for: MAKROLON 1899 000000**

No data available for this product.

**13. Disposal Considerations****Waste Disposal Method**

Waste disposal should be in accordance with existing federal, state and local environmental control laws.

**14. Transportation Information****Land transport (DOT)**

Non-Regulated

**Sea transport (IMDG)**

Non-Regulated

**Air transport (ICAO/IATA)**

Non-Regulated

**15. Regulatory Information****United States Federal Regulations**

**US. Toxic Substances Control Act:** Listed on the Active Portion of the TSCA Inventory.

No substances are subject to TSCA 12(b) export notification requirements.

**US. EPA CERCLA Hazardous Substances (40 CFR 302) Components:**

None

**SARA Section 311/312 Hazard Categories:**

Refer to hazard classification information in Section 2.

**US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A) Components:**  
None

**US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required Components:**  
None

**US. EPA Resource Conservation and Recovery Act (RCRA) Composite List of Hazardous Wastes and Appendix VIII Hazardous Constituents (40 CFR 261):**  
Under RCRA, it is the responsibility of the person who generates a solid waste, as defined in 40 CFR 261.2, to determine if that waste is a hazardous waste.

**State Right-To-Know Information**

The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the SDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

The concentrations reported below in units of parts per million (ppm) or parts per billion (ppb) are maximum values.

**Massachusetts, New Jersey or Pennsylvania Right to Know Substance Lists:**

<u>Concentration</u>	<u>Components</u>	<u>CAS-No.</u>
>=1%	Bisphenol A Polycarbonate	25971-63-5
>=1%	Bisphenol A Polycarbonate	CAS# is a trade secret
>=1%	Bisphenol A Polycarbonate	CAS# is a trade secret
>=1%	Flame Retardant	CAS# is a trade secret
3 - 7%	Impact Modifier	CAS# is a trade secret

**New Jersey Environmental Hazardous Substances List and/or New Jersey RTK Special Hazardous Substances Lists:**

<u>Concentration</u>	<u>Components</u>	<u>CAS-No.</u>
0.1 - 1%	Polymer	CAS# is a trade secret

**Massachusetts Right to Know Extraordinarily Hazardous Substance List:**

<u>Concentration</u>	<u>Components</u>	<u>CAS-No.</u>
<=3 ppm	Methylene Chloride	75-09-2

**California Proposition 65 List:**

<u>Concentration</u>	<u>Components</u>	<u>CAS-No.</u>
<=3 ppm	Methylene Chloride	75-09-2
Trace element	Bisphenol A	80-05-7

**CFATS (Chemical Facility Anti-Terrorism Standards) Chemicals**

To the best of our knowledge, this product does not contain Appendix A Chemicals of Interest (COI), at or above the Screening Threshold Quantity (STQ), as defined by the Department of Homeland Security Chemical Facility Anti-terrorism Standard (CFATS, 6 CFR Part 27).

Based on information provided by our suppliers, this product is considered "DRC Conflict Free" as defined by the SEC Conflict Minerals Final Rule (Release No. 34-67716; File No. S7-40-10; Date: 2012-08-22).

## 16. Other Information

The method of hazard communication for Covestro LLC is comprised of product labels and safety data sheets. Safety data sheets for all of our products and general product declarations are available for download at [www.productsafetyfirst.covestro.com](http://www.productsafetyfirst.covestro.com).

Contact: Product Safety Department  
Telephone: (412) 413-2835  
SDS Number: 112000022991  
Version Date: 12/18/2018  
SDS Version: 1.5

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