

Section 1. Product and company identification

1.1 Identification of the material: Polymaker N600 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

GHS Classification:

Health Hazards:

Acute toxicity -Oral: Not classified

Acute toxicity -Dermal: Not classified

Acute toxicity -Inhalation: Category 5

Skin corrosion/irritation: Not classified

Serious eye damage/eye irritation: Not classified

Respiratory sensitization: Not classified

Skin sensitization: Not classified

Germ cell mutagenicity: Not classified

Carcinogenicity: IARC 3

Reproductive toxicity: Not classified

Specific Target Organ/Systemic Toxicity (Single Exposure): Not classified

Specific Target Organ/Systemic Toxicity (Repeated Exposure): Not classified

Aspiration hazards: Not classified

Environmental Hazards:

Aquatic environmental hazards: Not classified

Chronic environmental hazards: Not classified

Precautionary statement:**Prevention:**

- Do not handle until all safety precautions have been read and understood.
- Keep away from ignition sources such as heat/ sparks/ open flame. -No smoking.
- Wear protective gloves and eye/face protection – as specified by the manufacturer / supplier or the competent authority.
- Volatile gases which may irritate eyes, nose and throat may be released.
- Use adequate local exhaust ventilation during and molding.
- Get medical advice/attention if you feel unwell.
- Sweep up and dispose of spilled resin to eliminate slipping hazard.
- Do not pile up bags too high in order to avoid injury caused by falling of the product.

Response:

- Wash thoroughly after handling.
- Get medical advice/attention if you feel unwell.

Storage:

- Store in a well ventilated place. Protect from sunlight.
- Do not pile up bags too high in order to avoid injury caused by falling of the product.

Disposal:

- Dispose of contents/container in accordance with regulation in a well-ventilated area.

Section 3. Composition/information on ingredients

3.1 Substances

Chemical Name	CAS No.	Weight %	Exposure Limits
Polyamide 6	25038-54-4	> 90%	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. Wash all contaminated clothing and gloves before using those again.

4.1.3 Eye contact: Rinse immediately with plenty of water. Call a physician immediately. Remove contact lenses if any before continuing to rinse. Do not let the victim rub his eyes.

4.1.4 Ingestion: Give water to the victim if conscious, but do not make him vomit. In case of vomiting, do

not let the victim swallow the vomit. 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

Protective action needs to be done under full understanding of substance.

Section 5. Fire-fighting measures

5.1 Suitable extinguishing media

In case of fire use spray, dry powder, solid water stream, foam and CO₂.

5.2 Special hazards arising from the substance or mixture

Emission of toxic gases: Nitrogen Oxides (NO_x), Carbon monoxide (CO), Carbon Dioxide (CO₂), and related Carbon compounds.

This product will produce a lot of black smoke when it burns.

In a fire, thermal decomposition or combustion can produce irritating and highly toxic gases.

5-3. Protective equipment and Precautions for fire fighters:

Wear high-pressure self-respiratory protection apparatus to avoid inhalation and skin contact of released chemicals.

5-4. Physical and Chemical data on flammability and explosiveness:

Flash point: N/A

Ignition point: N/A

Explosiveness lower limits: N/A

Explosiveness upper limits: N/A

5-5. Specific risks relating to firefighting measures:

When the product is burnt, fine carbon fiber particles may be produced. They may cause electrical short-circuits when contacted to electrical devices.

Fire extinguisher: dry powder, foam, Carbon dioxide (CO₂), water extinguisher

Section 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear gloves when handling hot melt of material.

In case of mass release, avoid inhalation of dust and aware substances and condition to avoid.

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.

Wear protection apparatus like a dust mask, dustproof goggles, gloves, and sealed foot wear to prevent inhalation and skin contact.

Section 7. Handling and storage

7.1 Precautions for safe handling

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation.

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

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Appropriate engineering controls

General industrial hygiene practice.

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Do not let product enter drains.

Section 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance: Filament, Solid

Color: black

Odor: Odorless

Odor threshold: Not available

pH: Not applicable

Melting point/freezing point: 203°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: No data available

Decomposition temperature: 406°C

Viscosity: Not applicable

Section 10. Stability and reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

No data available

10.5 Incompatible materials

Strong oxidizing agents. Strong acids.

10.6 Hazardous decomposition products

Other decomposition products - no data available

In the event of fire: see section 5

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

no data available

LC50 Inhalation - mouse - 30 h - 11,000 mg/m³

Dermal: no data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory sensitization

No data available

Skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Nylon 6)

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Other information

RTECS: TQ9800000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Section 12. Ecological information

12.1 Toxicity

No data available.

12.2 Persistence and degradability

No data available.

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects

No data available.

Section 13. Disposal considerations

13.1 Waste treatment methods**Product**

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

Section 14. Transport information

DOT (US)

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

Section 15. Regulatory information

SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

No SARA Hazards

Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

Nylon 6

CAS-No.: 25038-54-4

New Jersey Right To Know Components

Nylon 6

CAS-No.: 25038-54-4

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Section 16. Other information

Revision information

Date of this revision: Oct 17, 2018

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.