

1. Identification of the substance/mixture and of the company/undertaking

Product Name: PolyFlex™ 3D Printing Filament

CAS No.: See Section 3

Identified Uses: for fused deposition modeling (FDM) or fused filament fabrication (FFF) based additive manufacturing and 3D printing processes

Manufacturer: JF Polymers (Suzhou) Co. Ltd.

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

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

2. Hazards identification

Emergency Overview

Not likely to be an irritant in the solid form. Burning produces obnoxious and toxic fumes. Not likely to form a dust in the solid filament form.

Potential Acute Health Effects

Inhalation: Not likely to form an inhalable dust in the solid filament form and for the intended use. Thermal decomposition may result in release of toxic airborne contaminants.

Sensitization: Not likely to result in a sensitizing effect under the intended use.

Potential Chronic Health Effects

Carcinogenic Effects: No known carcinogenic effects

Mutagenic Effects: No known mutagenic effects

Teratogenic Effects: No known teratogenic effects

Developmental Toxicity: No known developmental toxicity

3. Composition/information on ingredients

Chemical Name	CAS No.	Weight %	Exposure Limits
Thermoplastic polyurethane	Proprietary	> 90%	None

4. First aid measures

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

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.

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

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.

Notes for the doctor: Treat symptomatically.

5. Fire-fighting measures

General Information: As in any fire, wear self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Suitable Extinguishing Agents: Dry chemical, carbon dioxide, water spray or regular foam. For large fires, use water spray, fog or regular foam.

Products of Combustion: Burning produces obnoxious and toxic fumes, carbon monoxide, carbon dioxide, hydrogen cyanide, nitrogen oxides, isocyanate.

Special Fire Fighting Procedures: Firefighters should wear self-contained breathing apparatus and full fire-fighting turn-out gear (bunker gear). Keep personnel removed and upwind of fire. Water should be used to keep fire-exposed containers cool.

Special Remarks on Fire and Explosion Hazards: Toxic gases/vapors/fumes may emit in a fire.

6. Accidental release measures

General: Wear gloves when handling hot melt of the material.

Environmental precautions: Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system.

Methods and material for containment and cleaning up: Shovel into suitable container for disposal.

7. Handling and storage

Precautions: No special precautions required.

Handling: Wear gloves when handling molten material. Low hazard for usual industrial or commercial handling.

Storage: Store in cool place. Avoid excessive heat and direct sunlight. No special restrictions on storage with other products.

8. Exposure controls/personal protection

Ventilation protection: Provide good ventilation during 3D printing processes.

Skin protection: avoid direct contact to the hot melt of material or wear gloves.

Eye and face protection: Safety glasses if necessary.

General: Wear protective clothing to prevent contact with hot melt materials.

9. Physical and chemical properties

Appearance: Filament, Solid

Color: Various

Odour: Odorless

pH: Not applicable

Melting point: Not determined

Boiling point: Not applicable

Density: 1.18 – 1.23 g/cm³

Vapor pressure: Not applicable

Partition coefficient (n -octanol/water): Not applicable

Solubility(ies): Not determined

Flash point: Not determined

Auto-ignition temperature: Not determined

10. Stability and Reactivity

Stability: Stable under recommended storage conditions

Polymerization: Not applicable

Dangerous Decomposition Products: Burning produces obnoxious and toxic fumes, carbon monoxide, carbon dioxide, hydrogen cyanide, nitrogen oxides, isocyanate.

Conditions to avoid: No data available

Materials to avoid: Oxidizing agents. Strong bases.

11. Toxicological information

Routes of entry: N.A.

Acute toxicity: Data not available

12. Ecological information

Mobility: No data available

Bioaccumulation: Poorly biodegradable

Ecotoxicity effects: Data not available.

13. Disposal considerations

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

14. Transport information

No a DOT controlled material (United States)

Proper Shipping Name: Not regulated

Hazard Class: Not regulated

UN. NO.: Not regulated

Packing Group: Not regulated

IMDG EMS: Not regulated

15. Regulatory information

European/International Regulations

This product is on the European Inventory of Existing Commercial Chemical Substances.

European Labeling in Accordance with EC Directives

Hazard Symbols: N/A

Risk phrases: N/A

Safety phrases: N/A

HMIS (U.S.A.):

Health Hazard: 0

Fire Hazard: 1

Reactivity: 0

Personal Protection:

National Fire Protection Association(U.S.A.):

Health: 0

Flammability: 1

Reactivity: 0

Specific Hazard:

Federal and State Regulations:

TSCA 8(b) inventory: Listed

Canada–WHMIS:

Not controlled

For details regulations you should contact the appropriate agency in your country.

16. Other information

Revision information

Date of this revision: June 14 2014



Material Safety Data Sheet

PolyFlex™

Last revision date: June 14, 2014

MSDS No: S2C20140614A

Declare to reader

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