

# Safety Data Sheet(SDS)

## According to GHS

**Report No.:** WTH19H12086963C-9

**Date:** Dec. 20, 2019

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### Section 1 - Identification of the substance/preparation and of the company/undertaking

**Product identifier**

**Product Name :** PA-CF  
**Trade Name:** 3D printed lines  
**Chemical Uses:** 3D printing supplies  
**File Numbers :** WTH19H12086963C-9  
**Transport Fashion:** Air, sea, rail, highway

**Details of the supplier of the safety data sheet**

**Manufacture/Supplier :** Zhenjiang Flashforge 3D Technology Co.,Ltd.  
**Address:** No.518,Xianyuan Road,Wucheng District ,Jinhua City,Zhejiang Province.  
**Tel :** 181 5795 7275  
**Emergency number :** 0579-89007351  
**E-mail :** 184021419@qq.com

**Further information obtainable from:** Zhenjiang Flashforge 3D Technology Co.,Ltd.

### Section 2 - Hazards Identification



**GHS classification:**

Not applicable

**Label elements:**

Not applicable

**SIGNAL WORD:**

Not applicable

### Section 3 –Composition/Information on Ingredients

Ingredient Name	CAS No.	EC No.	Content (%)
PA12	24937-16-4	607-456-5	>84.9
Carbon fiber	7440-44-0	231-153-3	15
Other additives	--	--	<0.1

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### Section 4 - First Aid Measures

#### INGESTION

- Immediately give a glass of water.
- First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

#### EYE

If this product comes in contact with the eyes:

- Wash out immediately with water.
- If irritation continues, seek medical attention.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

#### SKIN

If skin or hair contact occurs:

- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.
- In case of burns:
  - Immediately apply cold water to burn either by immersion or wrapping with saturated clean cloth.
  - DO NOT remove or cut away clothing over burnt areas. DO NOT pull away clothing which has adhered to the skin as this can cause further injury.
  - DO NOT break blister or remove solidified material.
  - Quickly cover wound with dressing or clean cloth to help prevent infection and to ease pain.
  - For large burns, sheets, towels or pillow slips are ideal; leave holes for eyes, nose and mouth.
  - DO NOT apply ointments, oils, butter, etc. to a burn under any circumstances.

#### INHALED

- If dust is inhaled, remove from contaminated area.
- Encourage patient to blow nose to ensure clear passage of breathing.
- If irritation or discomfort persists seek medical attention.

#### NOTES TO PHYSICIAN

- Treat symptomatically.

### Section 5 - Fire Fighting Measures

#### EXTINGUISHING MEDIA

- Do NOT direct a solid stream of water or foam into burning molten material; this may cause spattering and spread the fire.
- Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.
- Water spray or fog - Large fires only.

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### FIRE FIGHTING

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water courses.
- Use water delivered as a fine spray to control fire and cool adjacent area.
- DO NOT approach containers suspected to be hot.
- Cool fire exposed containers with water spray from a protected location.
- If safe to do so, remove containers from path of fire.
- Equipment should be thoroughly decontaminated after use.

### FIRE/EXPLOSION HAZARD

- Nylon fines in air possess electrostatic properties which assist sparking.
- n small fires flame retardant grades of nylon should cease flaming once source of ignition is removed. In large fires burning will be sustained if sufficient oxygen is available. Decomposes on heating and produces toxic fumes of ammonia, nitrogen oxides (NO<sub>x</sub>), minor amounts of hydrogen cyanide and in case of flame retardant grades, halogenated gases.

### FIRE INCOMPATIBILITY

- Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result

### Section 6 –Accidental Release Measures

#### MINOR SPILLS

- Clean up all spills immediately.
- Avoid breathing dust and contact with skin and eyes.  
Wear protective clothing, gloves, safety glasses and dust respirator.  
Use dry clean up procedures and avoid generating dust.  
Sweep up, shovel up or  
Vacuum up (consider explosion-proof machines designed to be grounded during storage and use).  
Place spilled material in clean, dry, sealable, labelled container.

#### MAJOR SPILLS

- CAUTION: Advise personnel in area.
- Alert Emergency Services and tell them location and nature of hazard.
- Control personal contact by wearing protective clothing.
- Prevent, by any means available, spillage from entering drains or water courses.
- Recover product wherever possible.
- IF DRY: Use dry clean up procedures and avoid generating dust. Collect residues and place in sealed plastic bags or other containers for disposal. IF WET: Vacuum/shovel up and place in labelled containers for disposal.
- ALWAYS: Wash area down with large amounts of water and prevent runoff into drains.

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If contamination of drains or waterways occurs, advise Emergency Services.

Personal Protective Equipment advice is contained in Section 8 of the SDS.

### Section 7 - Handling and Storage

#### PRECAUTIONS FOR SAFE HANDLING

- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Prevent concentration in hollows and sumps.
- DO NOT enter confined spaces until atmosphere has been checked.
- DO NOT allow material to contact humans, exposed food or food utensils.
- Avoid contact with incompatible materials.
- When handling, DO NOT eat, drink or smoke.

#### SUITABLE CONTAINER

- Polyethylene or polypropylene container.
- Check all containers are clearly labelled and free from leaks.

#### STORAGE INCOMPATIBILITY

- Avoid reaction with oxidising agents.

#### STORAGE REQUIREMENTS

• Nylon, nitrosated with dinitrogen trioxide and stored cold, exploded on warming to ambient temperature. The N-nitroso-nylon is similar structurally to N-nitroso-N-alkylamides, some of which are thermally unstable. Nylon components should be excluded from contact with nitrosating agents.

BREThERICK L.: Handbook of Reactive Chemical Hazards

- Avoid reaction with oxidising agents

### Section 8 - Exposure Controls, Personal Protection

#### APPROPRIATE ENGINEERING CONTROLS

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.

The basic types of engineering controls are:

Process controls which involve changing the way a job activity or process is done to reduce the risk.

Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.

#### PERSONAL PROTECTION



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### EYE AND FACE PROTECTION

- Safety glasses with side shields
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task.

### SKIN PROTECTION

See Hand protection below

### HANDS/FEET PROTECTION

The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Suitability and durability of glove type is dependent on usage.

### BODY PROTECTION

See Other protection below

### OTHER PROTECTION

No special equipment needed when handling small quantities.

### OTHERWISE:

- Overalls.
- Barrier cream.
- Eyewash unit.

## Section 9 - Physical and Chemical Properties

### Information on basic physical and chemical properties

Color	Black
Form	Solid
Odor	Odorlessness
Melting Range (°C)	No data.
Boiling Range (°C)	No data.
Flash Point (°C)	No data.
Decomposition Temp (°C)	No data.
Autoignition Temp (°C)	No data.
Upper Explosive Limit (%)	No data.
Lower Explosive Limit (%)	No data.
Volatile Component (%vol)	No data.
Molecular Weight	No data.
Viscosity	No data.
Solubility in water (g/L)	No data.

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<b>pH (1% solution)</b>	No data.
<b>pH (as supplied)</b>	No data.
<b>Vapour Pressure (kPa)</b>	No data.
<b>Specific Gravity (water=1)</b>	No data.
<b>Relative Vapour Density (air=1)</b>	No data.
<b>Evaporation Rate</b>	No data.

### Section 10 - Stability and Reactivity

#### REACTIVITY

See section 7

#### CHEMICAL STABILITY

- Product is considered stable and hazardous polymerisation will not occur.

### Section 11 - Toxicological Information

#### Information on toxicological affects

##### Acute Toxicity

##### LD/LC50 values relevant for classification

No data.

##### Primary irritant effect

###### On the skin

The material is not thought to produce adverse health effects or skin irritation following contact (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting.

###### On the eyes

Although the material is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may cause transient discomfort characterised by tearing or conjunctival redness (as with windburn). Slight abrasive damage may also result. The material may produce foreign body irritation in certain individuals.

###### Inhaled

There is some evidence to suggest that the material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage.

###### Sensitization

No data.

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### Section 12 - Ecological Information

<b>Ingredient</b>	<b>Persistence: Water/Soil</b>	<b>Persistence: Air</b>	<b>Bioaccumulation</b>	<b>Mobility</b>
PA12	No Data Available	No Data Available	No Data Available	No Data Available
Carbon fiber	No Data Available	No Data Available	No Data Available	No Data Available
Other additives	No Data Available	No Data Available	No Data Available	No Data Available

### Section 13 - Disposal Considerations

Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.

A Hierarchy of Controls seems to be common - the user should investigate:

- Reduction
- Reuse
- Recycling
- Disposal (if all else fails)

This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use.

### Section 14 - Transport Information

#### Labels Required

Marine Pollutant: NO

**NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS: UN, IATA, IMDG**

### Section 15 - Regulatory Information

#### REGULATIONS

The product needs to follow local regulations.

### Section 16 - Other Information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

This information of section 1,3 and 9 is provided by Zhenjiang Flashforge 3D Technology Co.,Ltd.

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### The photo of the sample



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