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Material Safety Data Sheet

(Ultra-high Molecular Weight Polyethylene Yarn)

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Material Safety Data Sheet

(Ultra-high Molecular Weight Polyethylene Yarn)

Section 1 - Chemical Product and Company Identification

- **Chinese name:** 超高分子量聚乙烯长丝
- **English name:** Ultra-high molecular weight Polyethylene Yarns
- **Manufacturer:** SINOPEC YiZheng Chemical Fibre Co. Ltd.
- **Manufacturer Address:** Yizheng city, Jiangsu Province, P.R.C.

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- **Recommended applications:**

Defense supplies field: Aerospace, bulletproof, anti-stab

Sport & labor protection field: anti-stab, anti cut

Shipping & fishery field: Industrial ropes, sling and shipping nets

- **Restricted to use:** Restrict use of the product under temperature above 75 °C

Section 2 - Hazards Identification

- **Main physical and chemical hazards**

Molten polymer will adhere to the skin and can cause severe burns. It can pollute the soil.

- **Hazards Classification**

According to *Classification and labels of dangerous chemical substances commonly used* (GB13690-92), this product isn't Hazardous Chemical.

- **Explosion Danger**

It can burn. In the event of combustion, combustion is not severe. But because of a large specific surface area, it's difficult to self-extinguishing.

- **The main symptoms of contact**

No abnormal reactions

Section 3 - Composition / Information on Ingredients

Purification	√ Mixture	
Component	Consistence	CAS No.
Ultra-high molecular weight Polyethylene Yarns		9002-88-4

Section 4 - First Aid Measures

➤ Skin Contact

If molten material gets on skin, cool rapidly with cold water. Do not attempt to remove material from skin. Obtain medical treatment for thermal burn.

➤ Eye Contact

In case of contact, immediately flush eyes with plenty of water. Call a physician if necessary.

➤ Inhalation

Break away from the scene. Consult a physician.

➤ Ingestion

Material will not be absorbed after ingesting. Consult a physician as soon as possible if feeling bad.

➤ Acute and late effects

No datas

Section 5 - Fire Fighting Measures

➤ Hazardous Characteristics

Material will burn meeting with open fire

➤ Extinguishing methods

Water, CO₂, Foam, Dry Chemical Powder

➤ Firefighters special protective equipment

Fire fighter must wear air respiration apparatus and exposure suit. Can't fight the fire caused by electrical equipment short circuit with water.

Section 6 - Accidental Release Measures

➤ Contingency Operation

This product is white or colored slim-shaped solid, no leaks. Pay attention to the flammability.

➤ Protective measures and equipments

Not available

➤ Environmental protection measures

Not available

➤ Methods or materials of removal

Not available

Section 7- Handling and Storage

➤ Handling Attentions

Be lightly while handing, loading and unload prevent from packing damage.

Stand to the warning sign while hoisting operation.

➤ Storage Attentions

The storage depot must be shady and ventilative. Keep material away from kindling, heat source. And prevent from solar radiation. Packaging materials recommended colorless plastic bags, cardboard boxes and cardboard.

Section 8 - Exposure Controls / Personal Protection

➤ Exposure Controls:

MAC(mg/m³): No standards

PC-TWA (mg/m³) : No standards

PC-STEL (mg/m³) : No standards

➤ Monitoring methods

No data

➤ Engineering control

Must equip air exhaust and protection for respiratory system in stuffy, stive, heat, dry etc. environment.

➤ **Protection for respiratory system**

If the air density is unacceptable, you must wear SCBA

➤ **Protection for eyes**

According to the convention of Industry health care, you must reduce the contact of eyes and object. Wear safety glasses with side shields

➤ **Protection for body**

Wear overall working uniform to prevent from scald and burn when material is heated.

➤ **Protection for hands**

Wear gloves to prevent from scald and burn when material is heated.

➤ **Protection for others**

Change uniforms after finishing work. Pay attention to personal cleanliness and hygiene.

Section 9 - Physical & Chemical Properties

Appearance and Characteristics: White or colored slim-shaped solid

PH: Not available

Melting Point(°C) : 140~150

Boiling Point (°C): Not available

Relative Density (water=1) : About 0.97

Relative steam Density (air=1) : Not available

Saturated vapor pressure(kPa): Not available

Heat of combustion(kJ/mol): No data

Critical temperature(°C): Not available

Critical pressure(Mpa): No data

The log BCF of the scale coefficient of octanol and water: Not available

Flash point(°C): No data

Ignition temperature(°C): About 341

Upper explosive limit%(V/V): Not available

Lower explosive limit%(V/V): Not available

Dissolubility: Not available

Smell: No

Autogenous ignition temperature (°C): 350

Decomposition temperature (°C): No data

Section 10 - Chemical Stability & Reactivity

➤ **Chemical Stability**

Stable under normal temperature and pressure condition

➤ **Dangerous reaction**

No data

➤ **Incompatibility With Other Materials**

Incompatible or react with strong acid, strong oxidizers and so on.

➤ **Conditions to Avoid**

Not available

➤ **Hazardous Polymerization**

Never occur.

➤ **Hazardous Decomposition Products**

Combustion products include carbon monoxide and the other harmful organics.

Section 11 - Toxicological Information

➤ **Acute toxicity**

Commonly the polymer is non toxic in spite of its monomers is toxic or not. But in some cases, when the polymer polymerized with toxic monomers degrades its monomers still is hazardous for organism. So don't intake as could as possible.

➤ **Skin irritation or corrosion**

No data

➤ **Eyes irritation or corrosion**

No data

➤ **Respiration or skin allergy**

No data

➤ **Germ cell mutability:**

No data

➤ **Carcinogenicity:**

No data

➤ **Reproductive toxicity:**

No data

Specific target organ systemic toxicity with single exposure

No data

➤ **Specific target organ systemic toxicity single exposure with repeated exposure**

No data

➤ **Inhalation hazard**

No data

➤ **Toxicity for others**

Nothing

Section 12 - Ecological Information

➤ **Ecology toxicity**

Testing result about environmental influence is not available

➤ **Durability and biodegradation**

No data

➤ **Potential bioaccumulation**

No data

➤ **Migration in soil**

No data

➤ **Adverse reaction for others**

No data

Section 13 - Disposal Considerations

➤ **Waste property**

Industrial solid waste

➤ **Disposal considerations methods**

Setting on fire preferably

➤ **Disposal considerations attentions**

Should refer to national and local government regulations before disposition.

Section 14 - Transportation Information

- **UN Dangerous Goods Code(UN no)**
No data
- **UN shipping name**
No data
- **UN danger classification**
No data
- **Marine contaminants**
No data
- **Transportation attentions**
Without special requirements for non-dangerous goods

Section 15 - Laws and Regulations

- **Laws, regulations and standards about chemical safe use, storage, transportation, loading and unloading, classification and label**
Safe production law of the People's Republic of China (enforcement on June 29, 2002);
Occupational diseases prevention and control law of The people's republic of China (enforcement on October 27, 2001)
Environment protection law of The People' s Republic of China (enforcement on December 26, 1989);
Regulations concerning safe production permit (enforcement on January 7, 2004).

Section 16 - Other Information

- **Time of issued**

April 8, 2012

➤ **Department of issued**

Production Technical Department of Sinopec Yizheng Chemical Fibre Co.Ltd.

➤ **Explanation of Preparation**

The information contained herein is based on current knowledge and experience, which does not mean sufficient and correct in all cases. Users can make independent determinations according to the information from all sources to assure proper transportation, employee's health and safety as well as environment protection.