

Material Safety Data Sheet

SECTION 1: PRODUCT IDENTIFICATION

Product Name: HTM[®] Twist Macro Fibers
(Macro-synthetic fibers, Macro Fibers)
Chemical Description: Polypropylene
Molecular Formula: [C₃H₆]_n
CAS: 9003-07-0

Product Use: Strengthen and crack resistance of concrete floor and components, which can be used instead of steel fiber.

Name of Company: Pioneer Scientific Industry (Nanjing) Co., Ltd
Address of Company: No.3 Jingming Road, Binjiang Develop Zone, Jiangning, Nanjing, China.
Zip Code: 211161
Telephone Number: +86-25-86218319

SECTION 2: Composition/Information on ingredients

This product is not a health hazard.

Ingredient: 100% Polypropylene

SECTION 3: HAZARDS IDENTIFICATION

Not categorized as hazardous or harmful material. No hazard anticipated under conditions of foreseeable use or exposure.

Primary routes of entry: Inhalation, ingestion, eyes and skin.

Hazard Classification: N/A

Health Hazards: N/A

Environmental Hazards: N/A

Explosion Hazards: N/A

Inhalability: Since the fibre has a diameter $>10 \mu\text{m}$, and a length $>1000 \mu\text{m}$, it does not fall in the category of inhalable fibres ($d < 3 \mu\text{m}$; $L < 500 \mu\text{m}$).

Eyes: Mildly irritating.

Skin: mildly itching.

Refer to Section E for Hazardous Combustion Products and Section J for Hazardous Decomposition/Hazardous Polymerization Products.

SECTION 4: FIRST AID PROCEDURES

Generally, no adverse health effects are expected from exposure to this product.

However, as with many materials, a very small percentage of the population may be allergic to one or more of the components that make up these products. Employees who have a history

of skin disease or allergy should receive medical clearance prior to employment involving direct contact.

SKIN CONTACT: Wash the contact area with water; Get medical attention if prolonged exposure.

EYE CONTACT: Immediately flush eyes with plenty amount of water for 15 minutes; Get medical attention if prolonged exposure.

INHALATION: Immediately remove victim to fresh air with good ventilation and restore normal breathing. Get medical attention if irritation develops or persists.

INGESTION: No hazardous effects if small amount is ingested; if large amount is ingested, the victim should be observed a few days to make sure there is no blockade or irritation to the stomach and intestine.

SECTION 5: FIRE HAZARDS

Fire and Explosion data:

Flammability: may ignite upon exposure to open flame.

Preventive measures: Store the product in a dry location with appropriate ventilation; keep away from open flames or sparks.

Use standard procedures for Class A fires.

Wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH approved (or equivalent) and full protective gear when fighting fires involving this product.

- Evacuate people crowd and quarantine the fire source.

EXTINGUISHING MEDIA:

Water spray, dry chemical, foam, carbon dioxide or Halon may be used on fires involving this product.

CONDITIONS TO AVOID:

None known.

HAZARDOUS COMBUSTION PRODUCTS:

If heated to combustion, the following substances may be formed: carbon monoxide, carbon dioxide, hydrocarbons, aldehydes, ketones, acrolein, fatty acids and products resulting from an incomplete combustion. Temperature, air supply, and materials present will affect the amount formed of any of the potential combustion products.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Environmental precautions: not applicable.

CONTROL PROCEDURES:

-To shovel the product into suitable container and could be treated as non-hazardous substance.

-The dust produced during the manufacturing process will precipitate in the air, if it accumulates on the floor; it can be shoveled into suitable container and could be treated as non-hazardous substance.

CLEANING PROCEDURES:

-Clean and collect the product. Put it into suitable container for further handling. If product is not contaminated, either reuse, or dispose of according to local legislation.

- Completely clean the spill / leak areas.
- Wear suitable protection clothing during the cleaning process
- Avoid spreading the dust around during the cleaning process.

SECTION 7: HANDLING AND STORAGE

GENERAL MEASURES:

Air-tight packaging; Stored at dry and well-ventilated areas.
Store in a warehouse that is protected with a fire sprinkler system.
Store at temperatures below 60°C (140°F).

HANDLING PRECAUTION:

No special precautions for handling.
Avoid inhaling the dust produced from the products.
Avoid eye and skin contacts with the dust.
Minimize the production of dust if possible.

MATERIALS OR CONDITIONS TO AVOID:

Avoid storing product near incompatible materials.
Avoid high temperature and rainwater.
Keep it away from exposure to children.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL HYGIENIC PRACTICES:

Avoid breathing fiber and dust.
Wash thoroughly after handling, and before eating, drinking or smoking.

RECOMMENDED EXPOSURE LIMITS:

EXPOSURE LIMITS:

(1) MAC (mg/m ³):	N/A
(2) TWA (mg/m ³):	N/A
(3) STEL (mg/m ³):	N/A

This product is not considered to present an inhalation health hazard under reasonably anticipated conditions of use.

PERSONAL PROTECTIVE EQUIPMENT:

- Respiratory: dust masks.
- Eyes: safety goggles
- Hands: safety gloves.

WORK PRACTICES AND ENGINEERING CONTROLS:

Eyewash fountains and safety showers should be easily accessible.
Provide adequate ventilation.

PROTECTIVE MEASURES DURING REPAIR AND MAINTENANCE:

Keep area clean. Product will burn.

OTHERS: No Smoking within the working areas and keep good hygiene habits.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Twisted Bundle Monofilament Fiber
Odor:	none

Color:	gray
Relative Density:	0.91
Melting Point:	320°F (160°C)
Solubility in Water:	Insoluble
Evaporation Rate:	N/A
Octanol to water partition coefficient:	N/A
PH:	N/A
Explosion upper limit (V/V):	N/A
Explosion lower limit (V/V):	N/A
Heat of combustion (kJ/mo.)	N/A
Application:	Construction; Floor; Reinforce/anti-cracking

SECTION 10: STABILITY AND REACTIVITY

GENERAL STABILITY CONSIDERATIONS:

Stable at recommended handling and storage conditions.

INCOMPATIBLE MATERIALS:

Incompatible with strong acids, bases, and oxidizing materials.

CONDITIONS TO AVOID:

Excessive heat should be avoided. Small quantities of fumes are produced at about 435 °F (225 °C). These fumes gradually increase until at above 572° F (300° C) decomposition (thermal degradation and oxidative pyrolysis) takes place. Above 572 °F, the heat of decomposition may produce a rapid rise in temperature which accelerates the decomposition. Under these circumstances hazardous substances such as carbon monoxide, formaldehyde and acrolein can be evolved.

HAZARDOUS DECOMPOSITION PRODUCTS:

Carbon monoxide, acetic acid, carbon dioxide, hydrocarbons, aldehydes, ketones, acrolein and fatty acids may be formed during decomposition or burning.

HAZARDOUS POLYMERIZATION:

Will not occur under normal or recommended handling and storage conditions.

SECTION 11: TOXICOLOGICAL INFORMATION

Acute exposure: not applicable.

Sensitization: not applicable.

Carcinogenicity: Not listed as carcinogenic by NTP. Not regulated as a carcinogen by OSHA. Not evaluated by IARC.

Mutagenicity: not applicable.

Reproductive Toxicity: not applicable.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICITY:

The fibers are not associated with any ecological problems.

The fibers are not biodegradable.

SECTION 13: DISPOSAL CONSIDERATIONS

Unused products should be treated as non-hazardous wastes, product should be recycled as much as possible. Otherwise, deposit in landfill or incinerate according to local regulation.

SECTION 14: TRANSPORTATION INFORMATION

According to IMO IMDG CODE, it does not belong to hazardous goods, and it is packaged according to the packaging requirement of ordinary goods.

Dangerous Goods No: N/A

UN No: N/A

Packaging Label: N/A

Packaging Type: N/A

Packaging Method: N/A

Precaution on transportation: No special regulations for this product. Complete packaging and proper loading; Use suitable containers to avoid leaking, toppling down, falling or damage of products during transportation; should not pack or transport with acids.

SECTION 15: REGULATORY INFORMATION

Refer to China, Europe Union, United States, and international standards.

SARA Title III Reporting Information

Tier I&II Hazard Categories: Not APPLICABLE

Contains Extremely Hazardous SARA I Section 302 Ingredient: NO Comments.

Contains Toxic Chemical Release SARA III Section 313 Ingredient: No Comments.

CHEMICAL INVENTORY CERTIFICATION:

All ingredients contained in this product are included on the US EPA Toxic Substances Control Act (TSCA) Inventory or exempt from listing on the TSCA Inventory.

For Canadian Products ONLY

All ingredients contained in this product comply with the requirements of the Canadian Environmental Protection Act (CEPA) and are listed on the Domestic Substance List (DSL) or Non-Domestic Substance List (NDSL).

CALIFORNIA PROPOSITION 65 INFORMATION: Not Applicable.

WHMIS CLASS: Not WHMIS regulated.

Nonhazardous Ingredient Disclosure: None

SECTION 16: OTHER INFORMATION

Department of Filling form: Technical Department

Date of issue: August.1.2017

Department of Data Auditing: N/A

Instruction for amendment:

All information contained herein is presented in good faith and without any warranty, including a warranty of the fitness of the information for a particular purpose.

This MSDS is made according to the present data we have, in the purpose of describing the health, safety and environment requirements of this product so that all parties can have better understanding and trust on this product. The information provided is just for reference and please be reminded that the safety precautions described above are not unique.

Therefore, this MSDS cannot serve as evidence or proof on any safety issues. Any parties have the responsibility to finish the safety tests of this product to examine whether this product can satisfy your application.

This Material Safety Data Sheet information does not exempt the product user to respect all legislative, regulatory, and administrative texts related to the product safety, hygiene, human health, and environmental protection of his country.

Pioneer Scientific Industry (Nanjing) Co., Ltd accepts no liability for damages or losses resulting from the use or misuse of this information.