

## Material Safety Data Sheet

### SECTION 1: PRODUCT IDENTIFICATION

Product Name: HPM® AR Micro Fibers  
(Alkali-resistant Glass Fibers, AR Glass Fibers, AR Glass Filaments)  
CAS: N/A  
Composition: Alkali-resisting Glass  
Product Use: Reinforcement of concrete applications.

Name of Company: Pioneer Scientific Industry (Nanjing) Co., Ltd  
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### SECTION 2: COMPOSITION INFORMATION

Alkali-resisting Glass Fibers (GF) products are made of glass.  
Percentage: 100%

#### Physical characteristics

May cause temporary skin and mucous membranes itching due to the mechanical abrasion effect of fibers.

Inhalation: Exposure to airborne dusts and fibers, see section 11.

### SECTION 3: HAZARDS IDENTIFICATION

This product is not a health hazard.

Not categorized as hazardous or harmful material.

Primary routes of entry: Inhalation, skin, eye.

Hazard Classification: N/A

**Inhalation Risk:** Prolonged inhalation of alkali-resisting Glass Fibers may cause respiratory irritation, leading to breathing difficulties. Work in well-ventilated areas and wear appropriate respiratory protection.

**Skin Contact Risk:** alkali-resisting Glass fibers may cause skin irritation. Avoid direct contact and wear gloves when handling.

**Eye Contact Risk:** alkali-resisting Glass fibers may cause eye irritation. Avoid eye contact and wear protective eyewear.

**Environmental Risk:** alkali-resisting Glass fibers are not readily biodegradable and may have adverse effects on the environment. Proper disposal methods should be

followed in accordance with regulations.

#### **SECTION 4: FIRST AID MEASURES**

##### **Eye Contact:**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.  
Do not rub or scratch eyes.

##### **Skin Contact:**

Wash off immediately with soap and cold water.

DO NOT use warm water because this will open up the pores of the skin, which will cause further penetration of the fibers.

DO NOT rub or scratch affected areas.

Remove contaminated clothing.

If skin irritation persists, call a physician.

##### **Inhalation:**

If inhaled, move to fresh air immediately and seek medical attention.

#### **SECTION 5: FIRE FIGHTING PROCEDURES**

Chopped Glass Fiber products are not flammable, are incombustible and do not support combustion.

Only the surfactant could release small quantities of hazardous gas in case of major and prolonged heat or fire.

Suitable Extinguishing Media:

water, dry chemical, foam, carbon dioxide (CO<sub>2</sub>).

Protective Equipment and Precautions for Firefighters:

Wear self-contained breathing apparatus and full fire-fighting protective gear.

#### **SECTION 6: SPILL/LEAK CLEANUP PROCEDURES**

Environmental Risk: alkali-resisting Glass fibers are not readily biodegradable and may have adverse effects on the environment. Proper disposal methods should be followed in accordance with regulations.

**CONTROL PROCEDURES:**

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

-Use an industrial vacuum cleaner with a high efficiency filter to clean up dust and residual spilled material.

**CLEANING PROCEDURES:**

-Clean and collect the product. Put it into a suitable container for further handling. If the product is not contaminated, either reuse, or dispose of it 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.
- After cleaning, flush away with water.

## **SECTION 7: HANDLING AND STORAGE**

### **GENERAL MEASURES:**

- Stored at dry and well-ventilated areas away from sources of ignition and oxidizing agents.
- Store in a warehouse that is protected with a fire sprinkler system.
- Keep product in its packaging until use to minimize potential dust generation.
- Use appropriate personal protective equipment including masks, gloves, and goggles when handling.

### **HANDLING PRECAUTION:**

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

### **MATERIALS OR CONDITIONS TO AVOID:**

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

## **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

### **GENERAL HYGIENIC PRACTICES:**

Glass fibers are not respirable, however certain mechanical processes might generate airborne dust or fiber.

Avoid breathing fiber and dust.

Wash thoroughly after handling, and before eating, drinking, or smoking.

### **Occupational Exposure Controls**

#### **Engineering Controls:**

Provide local exhaust and/or general ventilation systems to maintain low exposure levels.

Dust collection systems must be used in transferring operations, cutting, or machining or other dust generating processes.

Vacuum or wet clean-up methods should be used.

#### **Personal Protective Equipment**

##### **Respiratory Protection:**

In situations where concentrations are above exposure limits, appropriate dust masks must be worn.

**Eye/Face Protection**

Safety glasses with side-shields.

**Skin Protection**

Protective gloves.

Long sleeved shirt and long pants.

**General Hygiene Considerations**

Wash hands before breaks and immediately after handling the product.

Avoid contact with skin, eyes, and clothing.

Avoid getting dust into boots and gloves through wrist bands and pant tucks.

Remove and wash contaminated clothing before re-use.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

Appearance:	White, soft, slender glass fibers
Odor:	None
Density:	2.54 g/cm <sup>3</sup>
Melting Point:	Approximately 1710°C
Solubility:	Stable, avoids contact with strong oxidizing agents.

**SECTION 10: STABILITY AND REACTIVITY**

Chemical Stability: Stable under normal conditions.

Hazardous Decomposition Products: Hazardous Decomposition Products: none, except combustion products. See section 5.

Possibility of Hazardous Reactions: Hazardous reaction does not occur.

**SECTION 11: TOXICOLOGICAL INFORMATION**

**Acute Toxicity:** Not applicable.

**Local Effects:**

Dust and fibers may cause temporary skin and mucous membranes itching due to the mechanical abrasion effect of fibers. The symptoms disappear when the exposure ceases. Mechanical abrasion is not considered as a health hazard in the meaning of Regulation (EC) 1272/2008.

Inhalation may cause coughing and sneezing. High exposure may cause difficult breathing, congestion, and chest tightness.

**Long term health effects:**

Respirable fibers have a diameter (D) smaller than 3µm, a length (L) larger than 5µm and an L/D-ratio larger than or equal to 3. Fibers with diameters greater than 3 microns do not reach the lower respiratory tract and, therefore have no possibility of causing serious pulmonary disease.

Microscopic examination of dust from highly chopped and pulverized glass demonstrated the presence of small amounts of respirable dust particles. Among these respirable particles, some were fiber-like in terms of l/d ratio (so-called “shards”). It can be clearly observed however that they are not regular shaped fibers but irregular shaped particles with fiber-like dimensions.

#### **SECTION 12: ECOTOXICITY**

Ecology Toxicity: N/A

Biodegradability: N/A

Non-Biodegradability: N/A

The fibers are not associated with any ecological problems.

The fibers are not biodegradable.

This material is not expected to cause harm to animals, plants, or fish.

#### **SECTION 13: DISPOSAL CONSIDERATIONS**

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

#### **SECTION 14: TRANSPORTATION DATA**

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 regarding transportation: No special regulations for this product. Complete packaging and proper loading; Use suitable containers to avoid leaking, toppling down, falling, or damaging products during transportation.

#### **SECTION 15: REGULATORY INFORMATION**

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

This product is not hazardous according to European Regulation 1272/2008.

#### **SECTION 16: Others**

Department of Filling form: Technical Department

Date of issue: July.7.2018

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 a 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 party has 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.