

Material Safety Data Sheet

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January 2009

Section 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

CHEMICAL PRODUCT IDENTIFICATION:

Assembled Roving, Direct Roving, Dry Chopped Strands, Wet Chopped Strands, Woven Roving, Stitch Chopped Strand Mat, Power Chopped Strand Mat, Emulsion Chopped Strand Mat, Stitch Combo Mat, Woven Roving Combo Mat, Glass Filament Yarn, Marketable Cake, Cut Strands, Texturized Yarn.

MANUFACTURER INFORMATION

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MSDS NUMBER

Q/JS 5120

EFFECTIVE DATE

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Section 2: COMPOSITION / INFORMATION ON INGREDIENTS**INGREDIENTS OF PRODUCTS:**

| Product Name | Glass (%) | Size, | Binder (%) | Water (%) |
|---------------------------|-----------|-------|------------|-----------|
| Assembled Roving | ≥97.7 | ≤2.3 | / | / |
| Direct Roving | ≥99.2 | ≤0.8 | / | / |
| Dry Chopped Strands | ≥97.9 | ≤2.1 | / | / |
| Wet Chopped Strands | 87.8-92.0 | ≤0.2 | / | 8.0-12.0 |
| Woven Roving | ≥99.2 | ≤0.8 | / | / |
| Stitch Chopped Strand Mat | ≥91.7 | ≤1.0 | ≤7.3 | / |
| Power Chopped Strand Mat | ≥93.7 | ≤0.7 | ≤5.6 | / |
| Stitch Combo Mat ≥96.8 | ≤1.0 | ≤2.2 | / | |
| Woven Roving Combo Mat | ≥96.8 | ≤1.0 | ≤2.2 | / |
| Glass Filament Yarn | ≥98.8 | ≤1.2 | / | / |
| Cut Strands | 85.0-92.0 | / | / | 8.0-15.0 |
| Marketable Cake | ≥93.7 | ≤0.7 | / | / |
| Texturized Yarn | ≥99.4 | ≤0.6 | / | / |

PHYSICAL DATA

| | | | |
|--|---------------|---------------------------|---------------------|
| Boiling Point (F): | N/A | Vapor Density (Air=1): | N/A |
| Melting Point (F): | N/A | Specific Gravity (H2O=1): | Glass Fiber = 2.54 |
| Softening Point: | Approx. 1550F | | |
| Evaporative Rate (ethyl ether=1): | N/A | | |
| Odor: None Vapor Pressure (mmHg @ 20c): | N/A | | |
| % Volatile by Volume: | N/A % | Solubility (in water): | Insolvable in water |
| Appearance: Continuous fibers in rolls. Color: | White | | |

CAS NO.

Fiber glass: 65997-17-3
Size: N/A

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Section 3: HAZARDS IDENTIFICATION

Classification of Hazards: No information available.

Routes of Entry: Ingestion, inhalation, skin and eye contact.

Health Effects:

Ingestion: Ingestion of the material is unlikely. However, ingestion of the material may cause gastrointestinal disturbance.

Inhalation: Breathing fiberglass dusts and particulates may cause irritation of the nose, throat and respiratory tract.

Skin contact: Fiberglass dusts and particulates may cause temporary irritation.

Eye contact: Fiberglass dusts and particulates may cause temporary irritation to the eyes.

Environmental Effects: Long-term exposure to fiberglass environment may cause temporary effects.

Inflammation and Explosion Hazards: No information available.

Section 4: FIRST-AID MEASURES

Skin Contact: If irritation occurs to the skin, rinse with soap and water. Make sure to refrain from rinsing with warm water since warm water will make the skin pores open to allow fiberglass to penetrate more deeply. If fiberglass penetrates the skin, use a wash cloth to help pull out the fiberglass. To avoid further irritation, do not rub or scratch affected skin. If irritation persists, get medical help. Make sure to refrain from using compressed air to remove fiberglass from the skin.

Eye Contact: Immediately flush eyes with clean water for at least 15 minutes. If irritation persists, get medical help.

Inhalation: If inhaled, immediately remove the affected person to fresh air. If irritation persists, get medical help.

Ingestion: Normally, ingestion of this material is unlikely. If it does occur, watch the person for several days to make sure that gastrointestinal disturbance does not occur. Do not let the person vomit unless required by medical personnel. If disturbance persists, get medical help.

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Section 5: FIRE-FIGHTING MEASURES

FIRE AND EXPLOSION HAZARD DATA

| | | | | |
|-----------------------------|---|-----|------|-----|
| Flash Point (F) and Method: | N/A | | | |
| Flammable Limits: | LEL: | N/A | UEL: | N/A |
| Auto-ignition Temperature: | N/A | | | |
| Extinguishing Media: | Use that which is applicable to surrounding fire. | | | |

Flammability Classification: Non-flammable. But the size and packing material may burning.

Hazardous Combustion Products: Primary combustion products are carbon monoxide, hydrogen, carbon dioxide and water. Other undetermined compounds can be released in small quantities.

Fire-Fighting Methods: Use dry chemical, foam, carbon dioxide and water as extinguishing media.

Fire-Fighting Instructions: Fire fighters must use self-contained breathing apparatus and wear full protective gear.

Section 6: ACCIDENTAL RELEASE MEASURES

In case of release to land, the material should be scooped up as waste and put into a special container and stored in a designated area. In case of release of water, the material will sink and disperse along the bottom of waterways or ponds and can not be easily removed after it is waterborne. However, the material is non-hazardous in water.

Section 7: HANDLING AND STORAGE

Handling: Try to prevent the packing material from be damaged and keep the product inside the packing material to minimize the generation of dusts. Maintain a clean work environment and avoid generation of fiberglass fragments from improper handling.

Storage: No special requirements for storage.

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Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Highest Permissible Concentration: National and international hygiene standards are as follows:

| Component | Permissible Exposure Limit of OSHA (8-hr Average Weight) | Permissible Exposure Limit of ACGIH (8 hr Average Weight) |
|---|--|---|
| Non-respirable fibers and particulates | 5 mg/m ³ (Total dust) | 5 mg/m ³ (Inhalable fraction) |
| Respirable particulates | 5 mg/m ³ (Respirable fraction) | 3 mg/m ³ (Particles not otherwise classified) |
| Size of respirable particulates | None established | None established |

Engineering Control: Production areas are closed off and a required relative humidity is maintained.

Respiratory Protection: Wear a suitable mask when working in an environment where dust concentration is high.

Eye Protection: Wear safety glasses and face shield.

Body Protection: Normal loose working clothing (long-sleeved shirts and long pants) is recommended. Skin irritation occurs primarily at the contact areas such as around the neck and waist.

Hand Protection: Wear gloves. Skin irritation occurs primarily at the contact areas such as wrists and between the fingers.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Product Appearance and Properties: White or off-white solid. No odor.

pH Value: Not applicable

Melting Point: >800°C.

Boiling Point: Not applicable

Ignition Temperature: Not applicable.

Relative Density: 2.6 Times that of water.

Relative Vapor Density: Not applicable.

Product Use: Fiberglass is an inorganic nonmetal material and is used as reinforcement for thermoplastic and thermosetting resins.

Flash Point: Not applicable

Explosion Upper Limit: Not applicable

Explosion Lower Limit: Not applicable

Solubility (in Water): Insoluble

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Section 10: STABILITY AND REACTIVITY

Stability: This is a Stable material.

Materials to Avoid: None.

Conditions to avoid: None.

Hazardous Polymerization: Will not occur.

Section 11: TOXICOLOGICAL INFORMATION

Acute Toxicity: None.

Irritability: Fiberglass dusts may cause irritation to skin and eye. Ingestion of fiberglass may cause irritation to the throat, stomach and gastrointestinal tract. Inhalation may cause coughing, sneezing and nose and throat irritation. Experience indicates that inhalation of a large amount of fiberglass may cause difficulty in breathing, congestion and chest tightness.

Carcinogenicity: The International Agency for Research on Cancer (IARC), agency of the World Health Organization (WHO), has determined that fiberglass is a non-carcinogenic material because the evidence is inadequate to prove that fiberglass can cause humans and experimental animals to develop cancer.

Section 12: ECOLOGICAL INFORMATION

No data available for this product. Fiberglass products are not listed as a material harmful to animals, plants and fish.

Section 13: DISPOSAL CONSIDERATIONS

RCRA Hazard class: Non-hazardous.

Disposal Instructions: Dispose waste material according to local environmental regulations.

Section 14: TRANSPORT INFORMATION

Classification and Code of Hazards: None.

UN Code: None.

Packing Mark: None.

Packing Category: None.

Packing Method: None.

Transport Instructions: Rolling and moisture should be avoided in transit.

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Section 15: REGULATORY INFORMATION**SARA TITLE III****HAZARD CATEGORIES****Acute health:** Yes**Chronic health:** No**Fire hazard:** No**Pressure hazard:** No**Reactivity hazard:** No**REPORTABLE INGREDIENTS****Sec.302/304:** None**Sec.313:** None**Clean Air Act:** No ingredient is listed.**WHMIS(Canada) Status:** No controlled.**WHMIS classification(s):** None.**Section 16: OTHER INFORMATION****Preparation Date:** June 2004.**Prepared by:** Standardization and Measurement Dept., Jushi Group Co., Ltd.**Data Verified by:** Chief Engineer of Jushi Group Co., Ltd**Modification Information:** First Version

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