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# SAFE USE INSTRUCTIONS

For Continuous Glass Fiber Products

# INTRODUCTION

According to the European Regulation(ER) on Chemicals No.1907/2006(REACH) enforced from June 1<sup>st</sup> 2007, Material Safety Data Sheets (MSDS) are required only for hazardous substances and preparations. Continuous glass fiber products of our company are defined as "articles" under REACH and therefore MSDS are not required for them. In order to ensure our customers' acquisition of information on proper handling and use of glass fiber products, Jushi Group provides the customers with this Safe Use Instructions.

# SECTION 1 – IDENTIFICATIONS OF PRODUCTS AND COMPANY

### PRODUCT IDENTIFICATION

Continuous Glass Fiber Products include Assembled Roving, Direct Roving, Dry Chopped Strands, Wet Chopped Strands, Woven Roving, Stitch Chopped Strand Mat, Powder Chopped Strand Mat, Emulsion Chopped Strand Mat, Stitch Combo Mat, Woven Roving Combo Mat, Glass Filament Yarn, Marketable Cake, Cut Strands and Texturized Roving.

# **MANUFACTURER INFORMATION:**

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# **SECTION 2 – COMPOSITION / INGREDIENTS INFORMATION**

# **Product Composition:**

Product Name	Glass, %	Sizing, %	Binder, %	Water, %
Assembled Roving	98.75±0.75	1.05±0.75	/	≤0.20
Direct Roving	99.28±0.58	0.62±0.48	/	0.10±0.1
Dry Chopped Strands	99.08±0.82	0.82±0.75 /		≤0.10
Wet Chopped Strands	89.9±2.1	0.10±0.1	/	10.0±2.0
Woven Roving	99.33±0.53	0.57±0.43	/	0.10±0.1
Power Chopped Strand Mat	95.4±2.95	0.85±0.5	3.65±2.35	0.10±0.1
Emulsion Chopped Strand Mat	94.85±1.8	0.85±0.5	4.2±1.2	0.10±0.1
Glass Filament Yarn	98.9±0.3	1.0±0.2	/	0.10±0.1
Cut Strands	88.5±3.5	/	/	11.5±3.5
Marketable Cake	99.45±0.25	0.45±0.15	/	0.10±0.1
Texturized Roving	99.55±0.35	0.35±0.25	/	0.10±0.1

Product Name	Glass, %	Sizing, %	Binder, %	Water, %	Polyporpylene,%
Compofil	48.2~94.95	0.05~1.50	/	0~0.30	5.0~50.0

# CAS No.:

Glass Fiber: 65997-17-3

Sizing: N/A

# Sizing:

Sizing is a mixture of chemicals applied to the strand surface. It mainly consists of high-molecular polymers of no reactivity (usually natural ingredients, such as starch) which are not listed in the appendices of EINECS or ELINCS.

In some cases, sizing maybe also contain substances of organic-silane family or other substances. The manufacturer considers this risk as negligible as, even though listed as hazardous substance, their concentration is extremely low (under 0.1% of total weight) and they are polymerised during the production of glass fibers.

# **SECTION 3 – HAZARDS IDENTIFICATION**

With regard to their composition, these products are articles and not classified as hazardous according to European Directive 67/548/EEC and 99/45/EC and ST/SG/AC.10/30/Rev.2 and their latest amendments.

Glass Fiber products do not contain hazardous substances which can be released under normal or reasonably foreseeable conditions

#### **Classification of Hazards:**

No information available.

#### **Routes of Entry:**

Ingestion, inhalation, skin contact and eye contact.

#### **Health Effects:**

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

Inhalation: Breathing in glass fiber dusts and particulates may cause irritation to the nose, throat and respiratory tract.

Skin contact: Glass fiber dusts and particulates may cause temporary irritation.

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

#### **Environmental Effects:**

Long-term exposure to glass fiber 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 glass fiber to penetrate deeper. If glass fiber penetrates the skin, use a wash cloth to help pull out the glass fiber. Do not rub or scratch affected skin to any further any further deterioration. Please go to a doctor if irritation increases. Make sure to refrain from using compressed air to remove glass fiber from skin.

# **Eye Contact:**

Immediately flush eyes with clean water for at least 15 minutes. Please go to a doctor if irritation increases.

#### Inhalation:

Immediately move to fresh air. Please go to a doctor if irritation increases.

# Ingestion:

Normally, ingestion is less than likely. If it does occur, keep the person under observation for several days to make sure that no gastrointestinal disturbance occurs. Do not induce vomiting unless required by medical staff. Please go to a doctor if irritation increases.

# **SECTION 5 – FIRE-FIGHTING MEASURES**

## Continuous glass fiber products are neither flammable nor incombustible.

Only the sizing and the packing materials are combustible and could release small quantities of hazardous gas in case of major and prolonged heat or fire.

#### **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 should use self-contained breathing apparatus and wear full protective gear.

### **SECTION 6 – ACCIDENTAL RELEASE MEASURES**

#### **Personal precautions:**

Avoid contact with the skin and the eyes

## **Environmental precautions:**

Prevent further leakage or spillage if safe to do so.

# Methods for Clean-up:

- Pick up and transfer to properly labeled containers.
- Avoid dry sweeping.
- Shovel the major part of spilled material into a container.
- Use an industrial vacuum cleaner with a high efficiency filter to clean up dust and residual spilled material.
  - After vacuum cleaning, flush away with water.

# **SECTION 7 – HANDLING AND STORAGE**

#### Handling:

Try to prevent the packing material from being damaged and keep the product inside the packing material to minimize the generation of dusts. Maintain a clean work environment and avoid generation of glass fiber fragments from improper handling.

#### Storage:

Keep the product in its packaging until use to minimize potential dust generation.

# SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

Continuous glass fibers are not respirable. However, certain mechanical processes might generate airborne dust or fibers. The occupational exposure limits below mentioned are applicable to airborne fiber exposure and/or to dust exposure.

# **Exposure limits:**

**NOTE:** The user of continuous glass fibers products has to comply with the national regulations on occupational health protection. Occupational exposure limit values in some European countries are illustrated as below. (8-hour work day)

	Respirable dust	Total Dust	Respirable Fiber	
ACGIH	3 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	1 fiber/ml	
Austria	6mg/m <sup>3</sup>	/	0.5 fiber/ml	
Denmark	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	1 fiber/ml	
Finland	/	10 mg/m <sup>3</sup>	1 fiber/ml	
France	/	10 mg/m <sup>3</sup>	1 fiber/ml	
Germany	3 mg/m <sup>3</sup>	4 mg/m <sup>3</sup>	0.25 fiber/ml	
Irealand	5 mg/m <sup>3</sup>	/	2 fiber/ml	
Italy	3 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	1 fiber/ml	
Netherlands	2 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	1 fiber/ml	
Norway	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	1 fiber/ml	
Portugal	/	4 mg/m <sup>3</sup>	1 fiber/ml	
Spain	3 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	1 fiber/ml	
United Kingdom	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	2 fiber/ml	

# **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 – PHYSICLAL AND CHEMICAL PROPERTIES**

**Product Appearance and Properties:** 

White or off-white solid; No odor.

Flash Point: Not applicable

**pH Value:** Not applicable.

**Ignition Temperature:** Not applicable.

Melting Point: >800°C.

**Explosion Upper Limit:**Not applicable. **Boiling Point:**Not applicable.

**Explosion Lower Limit:** Not applicable.

**Relative Density:** 2.6 Times that of water.

Solubility (in Water): Insoluble

Relative Vapor Density: Not applicable

**Product Use:** 

Glass fiber is an inorganic nonmetal material and is used for plastic reinforcement, acoustic absorption and insulation.

# SECTION 10 - STABILITY AND REACTIVITY

# **Chemical Stability:**

Stable under normal conditions.

Materials to Avoid:

None.

**Conditions to Avoid:** 

None.

## **Possibility of Hazardous Reactions:**

Hazardous reaction does not occur.

# **SECTION 11 – TOXICOLOGICAL INFORMATION**

# **Acute Toxicity:**

None.

#### **Local Effects:**

Dusts and fibers may cause irritation to eyes and skin. The irritation disappears when the exposure ceases. Inhalation may cause coughing, nose and throat irritation and sneezing. High exposures may cause difficult breathing, chest distress and congestion.

Mechanical irritation is not considered as a health hazard under the European directive 76/548/EC on hazardous substances. It is required to classify continuous glass fibers as an irritant under the European directive 97/69/EC.

# **Long Term Health Effects:**

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

Continuous glass fibers do not possess cleavage planes which would allow them to split length-wise into fibers with smaller diameters, rather they break across the fiber, resulting in fibers which are of the same diameter as the original fiber with a shorter length and a small amount of dust.

Continuous glass fibers are not carcinogenic. (See section 15)

# SECTION 12 – ECOLOGICAL INFORMATION

Glass fiber products are not listed as a material harmful to animals, plants and fish. No specific data available for glass fiber products at present.

# **SECTION 13 – DISPOSAL CONSIDERATIONS**

#### **RCRA Hazard Class:**

Non-Hazardous.

European code number for waste is 101103.

## **Disposal Instructions:**

Dispose waste materials as per local environmental regulations.

## **DECTION 14 – TRANSPORT INFORMATION**

IMDG/IM - RID - ADR - ICAO - IATA - DOT - TDG - MEX

Not regulated

### **Transport Instructions:**

Rolling and moisture should be avoided in transit.

**SECTION 15 – REGULATORY INFORMATION** 

This product is not hazardous according to European Directive 99/45/EC, 67/548/EEC

and their latest amendments.

Information on Non-carcinogenicity:

According to EU Directives, the continuous glass fibers in these products are not

classified as carcinogenic.

Continuous glass fibers are not within the scope of Amendment 97/69/EC of Directive

67/548/EEC since they are not "fibers with random orientation".

The International Agency for Research on Cancer (IARC) categorized continuous glass

fiber as not classifiable with respect to human carcinogenicity (Group 3) in June1987 and

October 2001,. The evidence from human, as well as, animal studies was evaluated by

IARC as insufficient to classify continuous glass fiber as a confirmed, probable or even

possible cancer causing material.

**National Chemicals Inventory** 

Based on the rules enforced with regards to the marketing and use of chemicals in

countries where our Jushi products are manufactured, each chemical ingredient of these

finished products has to be listed on the National Chemicals Inventory of the specific

country where the products are produced.

However, continuous glass fiber products are "articles" under the chemicals inventories

listed below and consequently are exempt from listing on these inventories:

- The European Inventory of Existing Chemical Substances: EINECS/ELINCS,

- The US EPA Toxic Substance Control Act: TSCA.

- The Canadian Chemical Registration Regulations: NDSL/DSL,

- The Japanese Chemical Substances Control Law under METI: CSCL,

- The Australian Inventory of Chemical Substances: AICS,

- The Philippine Inventory of Chemicals and Chemical Substances: PICCS,

- The Korean Existing Chemicals List: (K)ECL and

- The Chinese List on New Chemical Substances.

SECTION 16 – OTHER INFORMATION

Preparation Date: March 2014

Prepared by: QA&EHS Dept

Data Verified by: Vice President of Jushi Group

**Modification** Information: The First Version

This document has been issued to align with REACH Regulation.

### Disclaimer

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