



## SAFETY DATA SHEET (SDS)

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### Section 1 : Identification of Product and Company Information

**Products Name** : Conventional Roving 358-2400TEX

**General Applications** : Reinforcement for Thermoplastic / Thermosetting Resin, PCB Laminating.

**Manufacturer :**

TAIWAN GLASS IND. CORP.

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### Section 2 : Hazards Identification

**Hazardous Classification:**

**Fiberglass Reinforced product is not classified as dangerous /hazardous for it's composition according to European Directive 1272/2008 (CLP) and Global Harmonized System(GHS).**

**Primary Routes of Exposure** : inhalation , skin , eye

**Potential Health Effects :**

ACUTE (short term) : Fiberglass Reinforced product is a mechanical irritant. Breathing dusts and fibers may cause temporary irritation of the mouth, nose and throat. Skin contact with dusts and fibers may cause itching and temporary irritation. Eye contact with dusts and fibers may cause temporary mechanical irritation. Ingestion may cause temporary mechanical irritation of the stomach and intestines.

CHRONIC(long term) : There is no known chronic health effects connected with long term use or contact with this product.

**Medical Conditions Aggravated by Exposure** :Respiratory or skin conditions that are aggravated by mechanical irritants may be at a increased risk for worsening from exposure to this product.

### Section 3 : Composition and Ingredients Information

<u>Common Name</u>	<u>Chemical Name</u>	<u>Cas No.</u>	<u>Wt. %</u>
Fiberglass Reinforced product	Fibrous Glass	65997-17-3	98-100

**Nonhazardous Ingredients**

Sizing / Binder                      Sizing                      Mixture                      0-2 NOTE 1

Note 1. Except : Chopped Strand Mat ( Sizing / Binder 2-8 Wt. %)

\*See Section 8 of SDS for exposure limit data for these ingredients.



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### Section 4 : First Aid Measures

**Inhalation** : Move to fresh air. If irritation persists , get medical attention .

**Skin Contact** : Wash with mild soap and running water . To avoid further irritation , don't rub or scratch affected areas . Rubbing or scratching may force fibers into the skin . If irritation persists , get medical attention.

**Eye Contact** : Flush eyes with running water for at least 15 minutes . If irritation

**Ingestion** : If swallowed, rinse mouth with water (only if the person is conscious).Keep person warm and at rest. Do not induce vomiting. Get medical attention/advice.

### Section 5 : Fire Fighting Measures

Fiberglass Reinforced product does not support combustion , only the binder/sizing are combustible and release small quantities of undetermined hazardous gas.

**Flammable Properties:** Non flammable

**Flash Point** : Not available

**Auto Ignition Point** : Not available

**Extinguishing Media**: Use appropriate extinguishers (eg.Water, foam, CO<sub>2</sub> or dry chemical).

**Fire Fighting Instructions**: Use Self Contained Breathing Apparatus (SCBA) and full protective gear in a sustained fire.

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

#### **NFPA Ratings:**

NFPA Flammability: 0  
NFPA Health: 1  
NFPA Reactivity: 0

#### **HMIS Ratings:**

HMIS Fire Hazard: 0  
HMIS Health Hazard: 1  
HMIS Reactivity Hazard: 0  
HMIS Physical Hazard: 0

Hazard Scale:

0=Minimal 1=Slight 2=Moderate 3=Serious 4=Severe \*=Chronic



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### Section 6 : Accidental Release Measures

**Personnel Precautions:** Avoid contact with skin and eyes.

**Environmental Precautions:** Prevent further leakage or spillage in water / air.

**Methods for Clean up:** Use an industrial vacuum cleaner with a high efficiency filter to clean up dust and fiber contamination(avoid dry sweeping). Collect and put into suitable container for disposal as a non-hazardous waste.

### Section 7 : Handling and Storage

**Handling Procedure:** Wear appropriate personal protective equipment(See Section 8) to avoid contact with skin and eyes directly.

**Storage:** It is recommended to store Fiberglass Reinforced product in a cool dry area. Keep product in its original packaging , as long as practicable to minimize potential dust generation. Avoid unnecessary handling of scrap materials.Do not stack higher than two pallets. There is no shelf life to Chopped Strand product while stored properly, but retest is advised for optimal performance if it's been produced for more than three years. Other glass fiber products should be used within 12 months from the delivery date to ensure optimum performance.

### Section 8 : Exposure Controls and Personal Protection

As manufactured Fiberglass Reinforced product is not respirable. Fiberglass Reinforced products that are chopped, crushed or severely mechanically processed during manufacturing or use may contain a very small amount of respirable particulate, some of which may be glass shards.

#### **Ingredient(s)- Exposure Limits**

	<b>OSHA</b> (8-hr TWA)	<b>ACGIH</b> (8-hr TWA)	<b>NIOSH</b> (8-hr TWA)
<b>Fiberglass Reinforced product</b>	15 mg/m <sup>3</sup> (total dust)	5 mg/m <sup>3</sup> (inhalable fraction)	5 mg/m <sup>3</sup> (total dust)
	5 mg/m <sup>3</sup> (respirable dust)	1 fiber/cm <sup>3</sup> (respirable fraction)	3 fiber/cm <sup>3</sup>
<b>Size</b>	None Established	None Established	None Established



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### Section 8 : Exposure Controls and Personal Protection (Continued)

**Engineering Controls:** General dilution ventilation and / or local exhaust ventilation should be provide as necessary to maintain exposures under occupational exposure limits.

**Personal Protective Equipment:**

**Respiratory Protection:** Wear a properly fitted NIOSH approved disposable dust respirator.

**Eye/Face Protection:** Safety glasses, goggles or face shield.

**Skin Protection:** Normal work clothing (long sleeved shirts and pants) and gloves are recommended.

### Section 9: Physical and Chemical Properties

**Appearance:** White or White-Yellow Fibers.

**Physical State:** Solid.

**Solubility in Water:** Insoluble.

**Odor:** Odorless.

**Viscosity:** Not Applicable.

**PH:**Not Applicable.

**Vapor Density:** Not Applicable.

**Boiling Point:** Not Applicable.

**Evaporation Rate:** Not Applicable.

**Freezing / Melting Point:** > 800°C.

**Auto Ignition Temperature:** Not Applicable.

**Flash Point:** Not Applicable.

**Lower / Upper Flammability:** Not Applicable.

**Lower / Upper Explosive Limit:** Not Applicable.

**Vapor Pressure (mm Hg @ 20 °C):** Not Applicable.

**Specific Gravity (Water =1):** 2.6



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### Section 10: Stability and Reactivity Information

**Stability:** Fiberglass Reinforced product is a stable material under normal conditions.

**Hazardous Polymerization:** Will not occur.

**Incompatibilities (Conditions / Materials to Avoid):** None.

**Hazardous Decomposition Products:** Sizing or binder may decompose in a fire situation.

\*See Section 5 of SDS for combustion products statement.

### Section 11: Toxicological Information

**Acute Toxicity:**

Glass dusts may cause temporary mechanical irritation to eyes and skin.

Temporary mechanical irritation is not classified as Irritant of European directive 67/548/EC.

Fiberglass Reinforced product does not require to assign the symbol "Xi" .

\*See Section 2 of SDS for potential health effects.

**Carcinogenicity:**

**Ingredient**

**IARC**

**ACGIH**

**OSHA**

Fiberglass Reinforced  
product(Non-respirable)

Group 3  
Not Classifiable  
as to its  
Carcinogenicity  
to Humans

A4  
Not Classifiable  
as a Human  
Carcinogen

No data

Sizing / Binder

No

No

No

**LD<sub>50</sub> Dermal**

(g/kg)

**LD<sub>50</sub> Oral**

(g/kg)

**LC<sub>50</sub> Inhalation**

(ppm, 8 hrs.)

Fiberglass Reinforced  
product(Non-respirable)

Not Available

Not Available

Not Available

Sizing / Binder

Not Available

Not Available

Not Available



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### Section 11: Toxicological Information (Continued)

**Fiberglass Reinforced product:** The International Agency for Research on Cancer ( **IARC** ) categorized Fiberglass Reinforced product as Not Classifiable as to Carcinogenicity to Humans (Group 3) in 1987 and affirmed this decision again in October, 2001 , based on inadequate evidence of carcinogenicity in humans and inadequate or limited evidence in experimental animals.

The American Conference of Governmental Industrial Hygienists ( **ACGIH** ) A4 classification, Not Classifiable as a Human Carcinogen, for respirable Fiberglass Reinforced product is based on inadequate data in terms of its carcinogenicity in humans and/or animals.

Products that are chopped, crushed or severely mechanically processed during manufacture or use may contain a very small amount of respirable glass fiber -like fragments.

**NIOSH** defines "respirable fibers" as greater than 5 microns in length and less than 3 microns in diameter with an aspect ratio of  $\geq 5:1$  (length-to-width ratio).

For respirable Fiberglass Reinforced product , a TLV-TWA of 1 fiber/cc was adopted to protect workers against mechanical irritation. The TLV-TWA of 5 mg/m<sup>3</sup> was adopted for non-respirable glass filament fiber, measured as inhalable dust, to prevent mechanical irritation of the upper respiratory tract.

**Note:** There are no known chronic health effects connected with long term use or contact with these products.

### Section 12: Ecological Information

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

### Section 13: Disposal Considerations

Fiberglass Reinforced product waste is not a hazardous material. Dispose of waste materials must be according to Local , State , Federal , and Provincial Environmental Regulations. Empty packing materials recycled or disposed also need to process under approved waste treatment regulations.



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### Section 14: Transportation Information

**IMDG / ADR / RID / ICAO / IATA / DOT / MEX / Canadian :** Not Regulated.

### Section 15: Regulatory Information

#### **REACH Regulation(EU) No 1907/2006:**

In Status Fiberglass Reinforced product under the REACH Regulation drafted by European Glass fiber Producers Association , is defined as Article according to REACH article 3(3)-definition.

No registration requirements are applicable to Article.(article 6(1) of the Regulation).

#### **Substances of Very High Concern (SVHC) status:**

Our Fiberglass Reinforced products do not use REACH SVHC Candidate List substances (revised on June 25 , 2020 ) .

Based on our knowledge , the concentration of each substance dose not exceed REACH limit 1000 ppm in our glass fiber products.

#### **RoHS Directive 2011/65/EU:**

Products analysis results are compliant with the limits of Restriction of Hazardous Substances Directive 2011/65/EU.

#### **European Directive 67/548/EEC & Directive 1999/45/EC:**

Fiberglass Reinforced product is not classified as dangerous substances & preparations of European Directive 67/548/EEC and Directive 1999/45/EC .

#### **European Standard EN 71,Part 3:**

Products analysis results are compliant with the limits of Safety of Toys-Migration of certain elements.

#### **Sony 00259:**

Products are compliant with the requirements of Sony SS-00259.

#### **US SARA Title III**

**SARA 302 Extremely Hazardous Substances:** Not Listed.

#### **SARA 311 / 312 Hazardous Categories:**

Acute Health Hazard:	Yes
Chronic Health Hazard:	No
Fire Hazard:	No
Pressure Hazard:	No
Reactivity Hazard:	No

**SARA 313 Toxic Chemicals:** Not Listed.





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### Section 15: Regulatory Information (Continued)

**Clean Air Act (1990):** Do not contain any hazardous substances that deplete the ozone layer.

**TSCA Status:** Products are manufactured compliant with TSCA.

**OSHA Status:** Product is not defined as hazardous by OSHA.

**California Proposition 65:** Fiberglass Reinforced product did not reach a level of carcinogenicity concern sufficient to placed on the candidate list.

**Canadian Regulatory:** Product is exempted from the Workplace Hazardous Materials Information System(WHMIS) and classified in accordance with the hazard criteria of the Controlled Products Regulations(CPR).  
This SDS contains all the information required by the CPR.

### Section 16 Other Information

#### **Acronyms / Definitions used in this SDS:**

ACGIH: American Conference of Governmental Industrial Hygienists

CAS No: Chemical Abstracts Service Number

California Proposition 65: California Safe Drinking Water and Toxic Enforcement Act of 1986

HMIS: Hazardous Material Identification System

IARC: International Agency for Research on Cancer

LC<sub>50</sub>: The air concentration of a substance, when administered over a specified time period in an animal assay, is expected to cause the death of 50% of a defined animal population.

LD<sub>50</sub>: The single dose of a substance that, when administered by a defined route in an animal use or contact with this product.

NFPA: National Fire Protection Association

NIOSH: National Institute for Occupational Safety and Health

OSHA: Occupational Safety and Health Administration

SARA: Superfund Amendments and Reauthorization Act

Title III: Emergency Planning and Community Right to Know Act

Section 302 - Extremely Hazardous Substances

Section 313 - Toxic Chemicals

TLV: Threshold Limit Value

TSCA: Toxic Substances Control Act (USA)

TWA: Time Weighted Average

WHMIS:Workplace Hazardous Materials Information System

GHS:Global Harmonized System

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