

# Binani

Goa Glass Fibre Ltd.

A Wholly Owned Subsidiary of BINANI INDUSTRIES LTD.

Village Colvale, Tal- Bardez, Goa, INDIA

## MATERIAL SAFETY DATA SHEET

In compliance with ISO 11014-1 dated 15.03.1994

### 1. COMPANY – PRODUCTS IDENTIFICATION

**MANUFACTURER:** GOA GLASS FIBRE LTD.

A wholly owned subsidiary of  
BINANI INDUSTRIES LIMITED

Colvale, Bardez, Goa, India

Telephone: +91 832 – 2299884 / 885 / 886

Fax: +91 832 – 2299887

#### 1.1 PRODUCT IDENTIFICATION:

1.1.1 Continuous Filament Glass fibre for plastic reinforcement.

Chopped Strand Mat, Direct Roving, Roving for pultrusion, Filament winding Roving, SMC Roving, Spray up Roving, Woven Roving, Chopped Strands.

1.1.2. Contact in emergency: Environmental function, Goa Glass Fibre Ltd, Village Colvale, Taluka – Bardez, GOA, INDIA Telephone: +91 832 – 2299884 / 885 / 886,:

Fax: +91 832 – 2299887

E mail: Binani\_goa@sancharnet.in

### 2. COMPOSITION - INFORMATION CONSTITUENT PARTS

CAS Number	COMPONENT	% BY WEIGHT
65997 – 17 - 3	Fibre Glass (non-respirable)	90.0% Min.
	Size & Binder	<10% Min.

2.1 Glassfibres are reinforcement materials sold in the form of chopped strand mat, direct roving, assembled roving, woven roving and chopped strands. This material safety data sheet is valid for all above products. As manufactured continuous filament glass fibre are not respirable. Continuous filament glass product that are chopped, crushed or severely mechanically proceed during manufacturing or use may contain a very small amount of respirable particulates some of which may be glass shards.

E glass – E glass is a very low alkaline content < 1 % alkali.

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## 2.2 Composition of E-glass

SiO <sub>2</sub>	52 – 62%
Alkaline oxides (Na <sub>2</sub> O <sub>2</sub> , K <sub>2</sub> O)	< 2%
Alkaline ferrous oxides (CaO, MgO....)	16 – 30%
B <sub>2</sub> O <sub>3</sub>	0 – 10%
Al <sub>2</sub> O <sub>3</sub>	11 – 16%
TiO <sub>2</sub>	0 – 3%
Fe <sub>2</sub> O <sub>3</sub>	0 – 1%
F <sub>2</sub>	0 – 2%

**2.3 SIZE** is a mixture of chemicals applied to the glass strands in a maximum quantity of 2.0% more generally less than 1.5%. Most of the mixture is made up of basically non reactive high molecular weight polymers.

**2.4 BINDER FOR MAT:** are high molecular weight polymer deposited in quantities under 10% and polymerized on chopped or continuous glass strands mats. They are not on dangerous product lists.

## 3. HAZARD IDENTIFICATION

**3.1** Continuous strand glass reinforced fibres are **not significantly hazardous**

Appearance and Odor: White / off – white colored solid with no odor

Primary Route(s) of Exposure: Inhalation, lungs, skin, and eye

Potential Acute Health Effects

**3.2 Inhalation:** Dusts and fibres from the product may cause mechanical irritation of the nose, throat and respiratory tract.

**3.3 Skin contact:** Dust and fibres from this product may cause temporarily mechanical irritation to the skin.

**3.4 Eye Contact:** Dusts and fibres from this product may cause temporary mechanical irritation to the Eye

**3.5 Ingestion:** ingestion of the product is unlikely. However, ingestion of product gastrointestinal irritation and disturbances.

**3.6 Medical condition Aggravated by exposure:**

Chronic respiratory or the skin condition may temporarily worsen from exposure to this product.

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## 4. FRIST AID MEASURES

- 4.1 Inhalation:** If inhaled, remove the affected person to fresh air. If there is irritation, get medical treatment.
- 4.2 Skin contact:** If there is skin contact, wash with soap and cold water. Wash with warm water to open up the pores of the skin. Use soft cloth to help remove fibres. To avoid further irritation, do not rub or scratch affected areas. If irritation persists, get medical attention.  
Never use compressed air to remove fibres from the skin. If fibre is seen penetrating the skin, the fibres can be removed from the adhesive tape so the fibre adheres to the tapes and are pulled out of the skin.
- 4.3 Eye contact:** Immediately flush eyes with plenty of water for at least 15 minutes. If irritation persists, get medical attention.
- 4.4 Ingestion:** Ingestion of this material is unlikely. If it does occur, watch the person for several days to make sure that partial or complete intestinal obstruction does not occur. Do not induce vomiting unless directed to do so.

## 5. FIRE FIGHTING

- 5.1** In case of fire, glass fibres are not flammable, are incombustible and don't support combustion.  
Only the packing (plastics film, paper, cardboard, wood) and the small amounts of the size or binder are likely to burn. Combustion gases are basically carbon dioxide and water vapor. There are small quantities of carbon monoxide and other unidentified substances, which make it necessary to use protective devices in the event of a major fire.

**RECOMMENDED EXTINGUISHING MEDIA:** water or chemical powder.

## 6. ACCIDENTAL RELEASE MEASURES:

- 6.1 Containment Procedure:** In case of accidental spillage, the material may fly in air and settle on ground. It can then be scooped up for disposal as non-hazardous waste. This material will sink and disperse along the waterways and ponds. The material does not give out any hazardous leachates.
- 6.2 Clean – up Procedures:** Scoop up material and put in to a suitable container for disposal as a non – hazardous waste or can be sucked with vacuum for disposal.
- 6.3 Response Procedures:** Isolate area.
- 6.4 Special Procedures:** None.

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## 7. HANDLING & STORAGE

### 7.1 HANDLING: (Technical / Precaution / Safe handling advice)

7.1.1 It is preferable to avoid prolonged contact with skin: wear gloves, garment with sleeves and long leggings or protective overalls, goggles; and dust mask.

7.1.2 Glass filaments and dust must be removed from work garment with vacuum cleaner and not blown off with compressed air jets. Wash work garments separately from other clothes.

### 7.2 STORAGE

7.2.1 Technical measures: Respect the stacking procedure recommended for each type of product.

7.2.2 Storage condition store away from excessive humidity to prevent damage to the product and to the packing materials which could lead to storage safety problems. Preferably Store between 10 and 35°C and relative humidity less than 85% for optimum performance. Material is not an electrical conductor, and may accumulate static charge.

7.2.3 Incompatible material not relevant.

## 8. EXPOSURE CONTROL / PERSONAL PROTECTION

8.1 Exposure Limit: 8- hour Time Weighted Average (TWA) – As applicable in respective countries 15 –minute short – Term Exposure Limit – As applicable in respective countries

OSHA: 15 mg / m<sup>3</sup> TWA. (Total dust)  
5 mg / m<sup>3</sup>TWA (respirable dust)

8.2 RESPIRATORY PROTECTION: During application of this product generate dust; use an appropriate NIOSH – approved particulate filter respirator.

8.3 VENTILATION: Use local exhaust or general ventilation sufficient to maintain employee's exposure below permissible exposure limits.

8.4 EYE AND FACE PROTECTION: Standard safety glasses with side shields.

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- 8.5** PROTECTIVE GLOVES: Use gloves to protect against physical irritation or injury if required.
- 8.6** OTHER PROTECTIVE EQUIPMENT: Wear clean, body-covering clothing. Good personal hygiene and the use of barrier creams, caps, protective gloves, cotton coveralls or long sleeved loose fitting clothing will maximize comfort. Vacuum equipment may be used to remove fibres from clothes. Work clothing should be laundered separately from other clothing before reuse.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

- 9.1** PHYSICAL STATE: Solid
- 9.2** FORM: Continuous or chopped strand mats glued or chopped strands or continuous woven fabric.
- 9.3** COLOUR: White or yellowish white.
- 9.4** ODOUR: None, except for some products from which a slight odor is sometime released when a pallet or carton is opened. This odor never indicates that an eventual toxic product has been released in a dangerous amount.  
PH not applicable.
- 9.5** SPECIFIC TEMPERATURE AT WHICH CHANGES IN PHYSICAL STATE OCCUR
- 9.5.1** Softening point: Littleton point (defined as the temperature for which the viscosity of the glass is 10 Poises): approximately 850°C
- 9.5.2** Melting point: Not applicable. Glass does not melt, but viscosity decreases by elevation of the temperature for E glass is in a range of temperature between 1150°C and 1250°C (Fibering temperature)
- 9.6** DECOMPOSITION TEMPERATURE: Sizes and mat binder start to decompose at 200°C
- 9.7** EXPLOSIVE PROPERTIES: None
- 9.8** DENSITY (Molten glass): 2.6 g/cu. Cm.
- 9.9** SOLUBILITY: Very low solubility in water. Sizes and binders can be partially (and even totally) dissolved in most organic solvents.

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## 10. STABILITY AND REACTIVITY

**10.1 STABILITY:** Stable in normal use and storage condition, and in normally foreseeable usage condition.

**10.2 HAZARDOUS REACTIONS:** Glass reinforcement strand are stable and never generate hazardous chemical reaction.

**10.3 HAZARDOUS DECOMPOSITION PRODUCTS:**

In continuous combustion, in addition to water vapor and CO<sub>2</sub>, small quantities of CO and NO<sub>x</sub> may be released from the combustion of the size and / or the binder. Other product may be released in limited quantities, depending on combustion condition. This is why it is recommended to use high – performance gas masks.

## 11. TOXICOLOGICAL INFORMATION

Acute effects:

**11.1 General product information**

Dust may cause mechanical irritation to eyes and skin. Ingestion may cause transient irritation of throat, stomach and gastrointestinal tract. Inhalation may cause coughing, nose and throat irritation, and sneezing people with pre- existing respiratory condition, may experience difficulty breathing, congestion and chest tightness.

**11.2 Sensitization:** Some person may be allergic to continuous strand fibres. All sizing mixtures are tested for their wet state sensitizing properties. In case of the allergy is conformed, remove the person from the exposure.

**11.3 Sub acute, sub chronic and prolonged toxicity – N.A.**

**11.4 Empirical data of effect on humans – N.A.**

**11.5 Irritancy and corrosiveness – N.A.**

**11.6** Other information on health effects- Goa Glass Fibre Ltd. dose not manufacture or use respirable glass fibre, Goa Glass Fibre Ltd. Manufactures fibres with a diameter above 7 micron. IARC (International Agency of Research on Cancer) categorizes fibre glass continuous filament as non – hazardous to human as well as animal.

## 12. ECOLOGICAL INFORMATION

Biodegradation – fibre glass is generally considered to be an inert solid waste. No special precaution is needed in case of a release or spill.

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## 13 DISPOSAL CONSIDARATION

Dispose off as solid waste in accordance with local government regulations being classified as non – hazards.

## 14. TRANSPORTS INFORMATION

UN number – Non regulatory  
Packing category – Non regulatory  
Land transport – Non regulatory  
Transport class – Non regulatory  
Risk code – Non regulatory  
Name according to bill of freight – Non regulatory  
Other information – Nil

### SEA TRANSPORTS

IMDG class – Non regulatory  
Correct technical name – Nil

### AIR TRANSPORTS

ICAO / IATA class - Non regulatory  
Correct technical name – Nil

## 15. REGULATORY INFORMATION

Information on the warning label – Nil  
Letter code of the warning symbol and indicators of danger for the preparation - Non regulatory  
Names of the ingredient given on the volume label - Non regulatory  
Special regulation on certain preparation - Non regulatory

## 16. OTHER INFORMATION

### 16.1 PURPOSE OF USE

**16.1.1** Expressed in writing product to be used as the reinforcement material in plastic industries, Glass fibre reinforced plastics, GRP

**16.1.2** Additional information – available from Goa Glass Fibre Ltd.

**16.1.3** Sources of the information used in the compilation of the safety data sheet – Information supplied by the collaborator.