F02

SDS according to Regulation (EC) No 1907/2006 (REACH)

May be used to comply with OSHA's Hazard Communication Standard.
29 CFR 1910, 1200. Standard must be consulted for specific requirements.
U.S DEPARTMENT OF LABOUR
Occupational Safety and Health Administration

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Article:
Article name: Glass fiber
CAS No.: 65997-17-3
Synonyms: fiber glass, glass fiber, glass fibre
Appearance: generally sold as a wool-like material
Stability: Stable.
REACH Registration No: Not available
The transition period according to REACH Regulation, article 23 has not yet expired.

Manufacturer:
Head office & Production Plant:

Vivian Regina Marketing (Pty) Ltd
P.O. Box 853, Springs, 1560, R.S.A.
Gold Street, New Era, Springs, 1559 R.S.A.
E-mail: sales@vivianregina.com / www.vivianregina.com

Emergency Contact Number
Tel: +27 (0) 11 813 4147/8/9
Telefax: +27 (0) 11 813 3743

1.2 Relevant identified uses of the article and uses advised against

Relevant identified uses:
In compliance with the conditions described in the annex to this safety data sheet.
Summarized overview of registered and identified uses and their respective exposure scenarios: pls. see annex to this SDS.

Uses advised against: --

Reasons: --

1.3 Details of the supplier of the safety data sheet:

Supplier: **Vivian Regina Marketing (Pty) Ltd**
P.O. Box 853, Springs, 1560, R.S.A.
Gold Street, New Era, Springs, 1559 R.S.A.

Emergency Contact Number	**Competent Person**
Tel: +27 (0) 11 813 4147/8/9 Telefax: +27 (0) 11 813 3743	p.trotter@vivianregina.com

Importer / Representative:

SECTION 2: Hazards identification

2.1. Classification of the article:

Label elements
Labelling according to Regulation (EC) No 1272/2008 [CLP/GHS]

Hazard pictograms

Signal word:
WARNING

Hazard statements:

H302	Harmful if swallowed
H316	Causes mild skin irritation
H317	May cause an allergic skin reaction

Precautionary statements:
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Safety statements:
S36/37 Wear suitable protective clothing and gloves.

2.2 Supplemental Hazard information (EU):
EUH401 To avoid risks to human health and the environment, comply with instructions for use.

2.3 Other hazards
No additional information available

2.4 Unknown acute toxicity
No data available

SECTION 3. Composition/information on ingredients

3.1 Substances

Name	Product Identifier	%	GHS-US classification
Glass fiber	(CAS No.) 65997-17-3	85-95	
Water Based Acrylic Resin Emulsion	(CAS No.) 9063-87-0	5-15	

[Full text of H-phrases: see section 16]

Glass fiber tissues are produced with continuous glass fiber monofilaments using chemically resistant glass and are defined as ARTICLES in the manual of decisions for implementation of the sixth and seventh amendments to directive 67/548/eec on dangerous substances (EU Directives 79/831/eec and 92/32/eec) or in the USA by the American TSCA (Toxic Substances Control Act) or EPA 40 CFR 710.2 and also some other national regulations (DSL in Canada to name one).

ARTICLE means a manufactured item other than a fluid or particle: (i) which is formed to a specific shape or design during manufacture; (ii) which has end use function(s) dependent in whole or in part upon its shape or design during end use; and (iii) which under normal conditions of use does not release more than very small quantities, e.g., minute or trace amounts of a hazardous chemical (as determined under paragraph (d) of this section), and does not pose a physical hazard or health risk to employees.

Composition of the chemically resistant glass used (expressed in approximate weight %):

SiO_2	69.0	BaO	2.0
B_2O_3	1.0	CaO	5.0
K_2O	3.0	MgO	3.0
Al_2O_3	4.0	Na_2O	13.0

The binders used to bond the glass filaments together are generally water based acrylic or latex emulsion resins or blends thereof (ins some specific products). They are polymerized by thermal treatment. Their content in the glass fiber tissue is between 2 and 30% by weight. When cross-linked for bonding the filaments together, they are high molecular weight polymers and as such are not listed as dangerous substances. Some of the monomers used for the production of these polymers may be listed in the dangerous products of the European Directive 67/548 and subsequent amendments, but remain only as traces in the end products.

Glass fiber veils and tissues made with chemically resistant continuous mono filament glass fibers using the dry process of manufacture are NOT SIGNIFICANTLY HAZARDOUS. Essentially, the glass fiber filaments are “non-respirable” as their nominal diameters are over 9 microns, above the diameter of 3 microns defined by the World Health Organization for “respirable” fibers, and have been shown not to cause lung cancer.

SECTION 4: First aid measures

4.1 Description of first aid measures

First-aid measures general:
Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

Following inhalation:
When symptoms occur: go into open air and ventilate suspected area. Remove to fresh air and keep at rest in a position comfortable for breathing. Call a doctor/physician if you feel unwell.

Following skin contact:
Remove contaminated clothing. Drench affected area with lukewarm soapy water for at least 15 minutes with minimal rubbing.

Following eye contact:
Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a doctor/physician if you feel unwell.

Following ingestion:
Rinse mouth. Do NOT induce vomiting. Call a doctor/physician if you feel unwell.

Self-protection of the first aider:
N/A

4.2 Most important symptoms and effects, both acute and delayed

Symptoms: Mild skin/eye itchiness.

Effects: Mild skin/eye irritation.

4.3 Indication of any immediate medical attention and special treatment needed

Notes for the doctor: If medical advice is needed, have product container or label at hand.

Special treatment: None.

SECTION 5: Firefighting measures

5.1 Extinguishing media:

Suitable extinguishing media: Water or Chemical powder.

Unsuitable extinguishing media: N/A

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products: There may be small quantities of carbon monoxide and other unknown substances that make it necessary to use protective devices in the event of a major fire.

5.3 Advice for fire-fighters

Firefighters should wear full protective gear. Do not enter fire area without proper protective equipment, including respiratory protection.

Additional information

In the case of fire, glass fibres are not flammable, are incombustible and don't support combustion. Only the packaging (plastic film, paper, cardboard, wood) is likely to burn. Binders, in spite of their organic nature, do not burn readily but can support combustion. Combustion gases are basically carbon dioxide and water vapour. There may be small quantities of carbon monoxide and other unknown substances that make it necessary to use protective devices in the event of a major fire.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Protective equipment: Use appropriate personal protection equipment (PPE)

Emergency procedures: Evacuate unnecessary personnel

For emergency responders

Personal protective equipment: Equip cleanup crew with proper protection. Use appropriate personal protection equipment (PPE)

6.2 Environmental precautions

Glass fiber waste does not emit any significant quantities of dangerous products and they can therefore be considered INERT INDUSTRIAL WASTE, or even COMMON INDUSTRIAL WASTE as defined by national and local regulations. All waste and scrap material should be disposed of in accordance with applicable national regulations

6.3 Methods and material for containment and cleaning up

For containment: N/A

For cleaning up: Vacuum clean, sweep or shovel into containers normally used for glass fiber waste.

Other information: N/A

6.4 Reference to other sections

Additional information: See heading 8, Exposure Controls and Personal Protection.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Protective measures:

Advice on safe handling: It is preferable to avoid prolonged contact with the skin. Wear gloves, garments with long sleeves and long leggings or protective overalls, goggles and dust masks.

Fire preventions: In the case of fire, glass fibres are not flammable, are incombustible and don't support combustion. Only the packaging (plastic film, paper, cardboard, wood) is likely to burn. Binders, in spite of their organic nature, do not burn readily but can support combustion. Combustion gases are basically carbon dioxide and water vapour. There may be small quantities of carbon monoxide and other unknown substances that make it necessary to use protective devices in the event of a major fire.

Aerosol and dust generation preventions: Glass filaments and dust must be removed from work garments with a vacuum cleaner and not blown off with compressed air jets. Wash work garments separately from other clothes.

Environmental precautions: Glass fiber waste does not emit any significant quantities of dangerous products and they can therefore be considered INERT INDUSTRIAL WASTE, or even COMMON INDUSTRIAL WASTE as defined by national and local regulations. All waste and scrap material should be disposed of in accordance with applicable national regulations (see Point 13).

Advice on general occupational hygiene: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions: Respect the stacking procedure recommended for each type of product. Store in a dry, cool and well-ventilated place to prevent damage to either the product and to the packing materials which could lead to storage safety problems. Keep container closed when not in use.

Incompatible materials: Not relevant.

Packaging materials: Not relevant

Requirements for storage rooms and vessels: Dry, cool and well-ventilated

Hints on storage assembly:

Storage class: Not relevant

Materials to avoid: Not relevant

Further information on storage conditions:

7.3 Specific end uses: Surface tissue for fiberglass composites manufacturing and special coatings reinforcement.

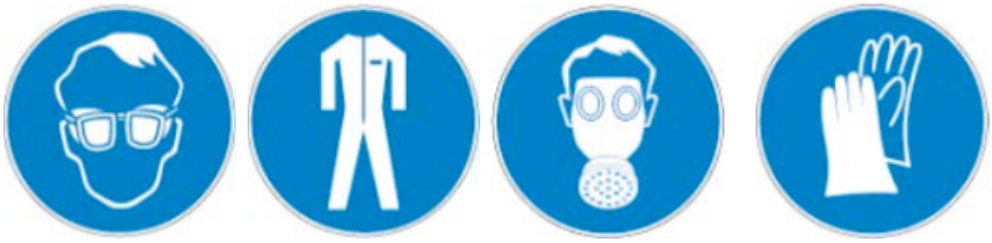
SECTION 8: Exposure controls/personal protection

8.1 **Appropriate engineering controls**: Preventive industrial medical examinations are to be carried out. Ensure all national/local regulations are observed. Use every appropriate means (suction, modification of manufacturing methods to reduce fiber dust, etc….) to try to reduce the concentration of fibers likely to cause irritation.

Test ambient atmospheres in which glass fiber is used regularly to determine levels of “non respirable” and “respirable” filaments; and “non respirable” and “respirable” dusts. Legal requirements for respirable and non-respirable dusts and fibers vary from country to country (or do not even exist).

It is recommended to identify the chemical nature of the fibers found in working atmospheres correctly, in particular insulation wools and mineral fibers like asbestos which are sometimes present and can be confused with continuous glass strands.

8.2 **Personal protective equipment:** Protective goggles. Gloves.



Hand protection: Wear protective gloves.

Eye protection: Wear protective goggles.

Skin and body protection: Wear suitable protective clothing. People with delicate skin should apply barrier cream to exposed skin.

Respiratory protection: During occasional operations releasing high quantities of dust, wear approved dust masks.

Thermal hazard protection: Not required

SECTION 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state:	Solid
Appearance:	Glass tissue rolls or strips
Color:	White, yellowish white or yellow depending on the binders
Odor:	None
Odor Threshold:	N/A
Ph:	N/A
Softening point:	(Glass) Approximately 720°C
Freezing point):	N/A
Boiling point:	N/A
Flash Point:	N/A
Auto-ignition temperature:	N/A
Decomposition Temperature:	(Polymer binders) 230°C to 250°C
Flammability (solid, gas):	N/A
Density:	(Depending on glass strands and binder rates) 2.5g/cm³ (Polymers of the binder 1.0 to 1.2g/cm³.
Solubility (In Water):	Very low
Viscosity:	N/A
Explosive Properties:	N/A
Oxidising Properties:	N/A
Explosive Limits:	N/A

SECTION 10: Stability and reactivity

10.1 Reactivity
Evolving gases may irritate the eyes, throat or nose. Toxic risks are low.

10.2 Chemical stability
If the normal temperature range of use is high, the binders used for glass tissues can be slightly degraded by heat.

10.3 Possibility of hazardous reactions
Glass tissues are stable and do not generate hazardous chemical reactions.

10.4 Conditions to avoid:
Not applicable

10.5 Incompatible materials:
Not applicable

10.6 Hazardous decomposition products:
In continuous combustion conditions, in addition to water vapor and CO_2, small quantities of carbon monoxide or other products may be released from the combustion of the binder. Other products may be released in limited quantities depending on combustion conditions.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity: Not classified

Skin corrosion/irritation: Not classified

Serious eye damage/irritation: Not classified

Respiratory or skin sensitization: Not classified

Germ cell mutagenicity: Not classified

Carcinogenicity: Not classified

Reproductive toxicity: Not classified

Specific target organ toxicity (single exposure): Not classified.

Specific target organ toxicity (repeated exposure): Not classified

Aspiration hazard: Not classified

Symptoms/injuries after inhalation: Not classified.

Symptoms/injuries after eye contact: Not classified.

Symptoms/injuries after ingestion: Not classified.

Other information

Possible temporary irritations. irritation is of a purely mechanical and temporary nature. It disappears when exposure is ended. It can affect the skin, eyes and respiratory tracts. In Europe mechanical irritation is not considered to be a health hazard within the Terms of European directives 67/548/EEC for hazardous products. This is confirmed by the fact that EC Directive 97/69/EC for mineral fibers does not stipulate the need to use a Xi (irritant) label nor a classification for continuous strand glass fibers (which in this Directive only applies to insulation glass wools in some circumstances).

Some allergies to continuous strand glass fibers have been declared. In case of a confirmed allergy, remove the person from the scene of exposure.

Continuous strand glass fibers are not respirable (i.e. do not penetrate the lung alveoli). This is because fiber is over 3µm in diameter (and mostly over 9µm). Even after handling the length of the finest dust is also well over 5µm and the length / diameter ratio is greater than 3:1. These are the values determined by the World Health Organization (WHO) for the definition of respirable fibers.

None of the following official organizations have attributed any risks of cancer during the production and use of continuous filament glass fibers:

World Health Organization (WHO): During its congress in June 1987 the WHO through the IARC (International Agency of Research on Cancer) examined all laboratory studies using animals and epidemiological studies carried out on continuous strand glass reinforcement tissues. The conclusion was that **GLASS FILAMENTS ARE NOT CLASSIFIED AS CARCINOGENIC.** They belong to the **Group 3 of IARC.** This classification has been confirmed by the IARC Working Group during its meeting of October 2001 and in the latest issue of the IARC monographs on the evaluation of carcinogenic risks to human's volume 81 on Man-made vitreous fibers, published in 2002.

The International Labor Office (ILO) and the CSIP (Chemical Safety International Program) came to the same conclusions in the congress held in 1987. European Commission Directive 97/69/EC dated 5/12/97 the 23rd amendment to Directive 67/548/EEC which concerns classification, packing and labeling of hazardous

substances did not think it necessary to include glass fibers as having carcinogenic risks.

OSHA (Occupational Safety and Health Administration) and NTP (U.S. National Toxicology Program) both official American organizations have not listed continuous strand glass fibers as hazardous substances and the ACGIH (American Conference of Government Industrial Hygienists) has classified them as A4 (not classified as carcinogenic for Man). No new studies have led the organizations to revise their position on this subject.

Epidemiological and laboratory studies carried out to date do not demonstrate in a scientifically significant way any risk of cancer related to reinforcement fibers. Several recent epidemiological studies (Chiazze 1997, Boffeta 1997) confirmed the absence of excessive mortality rates due to cancer in people working in glass fiber manufacturing facilities vs. control populations.

SECTION 12: Ecological information

12.1 Toxicity

Chemical resistant glass is not biodegradable as the concentration of the ingredients in the binder mixture and ingredient solubility is low, glass reinforcement fibers are considered to have no adverse eco-toxicological effects. Glass fiber products, polymers and additives are not likely to destroy the ozone layer and are not listed in the 1987 Montreal Protocol (Class 1 or Class 2). These lists are included in EC Regulation No. 3093/94 and in section VI of amendments to the “Clean Air Act” by the American Environmental Agency (EPA). Glass strands and binders do not contain PCB (Polychlorinated biphenyl) or other polyaromatic products of the same type.

12.2 Persistence and degradability

Non-Biodegradable

12.3 Bioaccumulative potential

Accumulation in organisms is not expected.

12.4 Mobility in soil

No additional information available

12.5 Other adverse effects:

Very low global warming potential.
No ozone depleting potential.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product / Packaging disposal: Depending on local regulations, glass tissue wastes can either be considered as inert waste or as common industrial waste. Glass fiber waste cannot be destroyed by incineration and can damage incinerators by the formation of a vitrified mass.

Waste codes / waste designations according to EWC / AVV: No additional information available

Packaging: Clean cardboard, wood, plastic (film or bags) and packaging can be eliminated in units specific to these products (i.e. for recycling or use as fuels).

Waste treatment options: Dispose of contents/container in accordance with local/regional/national/international regulations

Other disposal recommendations: No additional information available

SECTION 14: Transport information

INTERNATIONAL REGULATIONS: Glass fiber tissue products are not considered as hazardous goods by transport regulations. They are not part of one of the hazardous classes listed in international regulations. They do not need special procedures under any regulations.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Glass fiber tissue products do not require hazardous product labeling. General hygiene and work safety regulations apply.

SECTION 16: Other information

GLASS FIBER TISSUES ARE ALSO REFERRED TO AS SURFACE VEILS OR SURFACE MATS.
The information given by this document is based on the best knowledge at the date shown. It is given in good faith. Furthermore, user's attention is drawn to the possible risks run when the product is used for any purpose other than the one for which it was designed.

This SDS does not exempt users from knowing and applying the rules regulating their activities. Users assume full responsibility for applying the appropriate safety measures when the product is used.

For all additional information, users should contact Vivian Regina Marketing (Pty) Ltd.

Please Note :

Data provided in this Material Safety Data Sheet refer exclusively to the article described and not to a combination of this product with any of this product with any other kind of substances, preparations or articles responsible process. The data describes issues relevant to safety according to the best of our current knowledge and are intended to protect human beings and the environment. They do neither represent quality characteristics nor may they be construed as a release of responsibility to comply with all applicable regulations and obligations when handling the article. The data addresses professional users and is not intended for the general public.

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