



Liquid Roofing Systems Ltd

Prees Green

Shropshire

SY13 2BN

Tel: 01948 841 877

Fax: 01948 841 854

Web: lrs-systems.co.uk

Company Reg: 06963012

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First Edition

Material Safety Data Sheet

Producer name, address and telephone number:

LRS

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1. Product identification.

Commercial name:

glass fibre from E glass

Product:

glass roving, texturized roving, glass yarn, chopped glass fibre, chopped strand mat, glass fabric, tissue

2. Composition – information on components.

- glass fibre from E glass

(product consist mainly from oxides of: silicon, aluminium, calcium, boron-creates amorphous glassy state)

- size/binder

(complex compound of mixture consisting mainly of silicon and polymers)

mass fraction

min. 88 % - for mats

min. 97,75 % - for others

3 –12 % - for mats

0,4 – 2,25 % - for roving, yarn and fabrics

2.1. Chemical characteristics:

Glass fibres are not liable to classification concerning "dangerous substances" in the meaning of 67/548/EEC standard. Glass fibres are neither specified under CA,CAS numbers, nor under EPA code number. Glass and glass components of E glass are specified in EINECS under no 65997-17-3.





3. Dangers identification.

3.1. For people:

Contact with glass fibre sometimes can cause irritation of skin and rather rarely eyes, nose and throat pain. The substance can penetrate into organism mainly by respiratory tract. The glass fibre produced by LRS does not penetrate into organism by respiratory tract, due to the fact that its diameter exceeds 6 μm , while 3 μm is regarded the largest diameter of fibres with the ability of penetrating through respiratory tracts.

The same is true of industrial processing.

Symptoms under excessive exposure: rash, itch, inflammation of connective tissue, cough, sneezing.

Investigations carried on for many years among people who worked in glass fibre production has not provided an argument that contact with glass fibre led to malignant or non-malignant sickness of respiratory system. Current examinations show that cancer occurrence is independent of work in the production of glass fibre. Also experiments on animals (inhaling glass fibres) has not proved carcinogenic effect of these fibres. The International Institute for Cancer (IARC) has classified continuous glass fibres to group 3, ie. as non-carcinogenic for people.

Label classification EEC:

No hazardous substances/preparations

3.2. For environment: The product is stable and non-flammable in normal industrial conditions. When exposed to long-lasting fire, dangerous products of burning can escape from size and binder, but share of size and binder in the product is small. In case of waste disposal, glass fibre should be classified as neutral, solid waste. It is not necessary to use special rules for its disposal and storage. Provisions of local law should be applied.

3.3. For other plastics: danger not known.

4. First aid measures.

4.1. Inhalation:

if the irritation persists, consult a doctor (LRS produces fibre of diameter bigger than that which is regarded as the upper limit for fibres that can penetration into organism through respiratory tract).

4.2. Contact with skin:

wash the affected place with lukewarm water and soap, if a fibre is stuck in the skin, ask for a doctor.



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4.3. Contact with eyes:

wash immediately the affected eye for 15 minutes with plenty of clean, running water – consult a doctor.

4.4. Ingestion:

consult a doctor

4.5. Indications for doctor:

4.6. Special materials needed for first aid:

none

5. Fire fighting measures:

- product is non-flammable,
- in case of long-lasting exposure to fire, there is a possibility that fire-induced products may escape from size and binder,

5.1. Recommended measures:

not applicable,

5.2. Non-recommended measures:

not applicable,

5.3. Special risk resulting from material:

none,

5.4. Special means of protection:

in a case of longer contact with fire wear independent breath apparatus.

6. Steps in case of spilling.

Product does not cause environmental pollution

6.1. Recommended precautions:

no special precautions are recommended,

6.2. Means of environmental protection and cleaning:

the material should be disposed of as an inert solid waste according to local regulations

6.3. Additional precautions:

the product should be handled as substance which is not absorbed by organism through respiratory tracts, but in contact may cause skin, nose and throat irritation.

7. Handling and storage.

7.1. Handling.

7.1.1. Indications for safe handling of product:

- no special precautions with respect to health and safety are required in the handling of product,
- product should be treated as substance which is not absorbed by organism through respiratory tracts, but in direct contact may cause irritation of skin, nose and throat.





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7.1.2. Protection against explosion:

no danger of explosion,

7.2. Storage.

7.2.1. Requirements as to place and manner of storage:

Products of LRS Ltd should be stored in dry and closed area, to get optimal conditions; storage in temperature below 25°C and relative humidity below 65% is recommended.

7.2.2. Distance from explosives and combustibles:

7.2.3. Other data concerned conditions of storage:

As glass fibre shows tendency to electrification, when the mass of fibre is sufficient, electrostatic discharge may occur.

8. Exposure control and individual protection.

8.1. Respiratory tract protection:

Usually is not necessary, but when the concentration of glass fibre in the air is above allowable limit value (as described in local regulations), for example while continuous chopping of glass fibre, respiratory tracts should be protected by dust-masks, because the dust can cause irritation. Suction ventilation, which pulls the dust outside the workplace, is also recommended.

ACGIH Authorities of the United States have established allowable limit value of fibre contents in air, TLV (Threshold Limit Value). It was set at 10 mg/m³ for the period of 8 hours. This value was accepted by most of the countries. There are fibres that can be inhaled (diameter below 3 µm), and those that cannot be inhaled. LRS Ltd, produces only fibres above 6 µm, that cannot be inhaled.

8.2. Hands protection: to avoid skin irritation, protective gloves should be worn, protective cream may also be used,

8.3. Eyes protection: in case of processing which causes excessive dusting (for example chopping), protective glasses with side tabs should be worn.

8.4. Body protection: loose protective suit should be worn to prevent fibre contact with skin (shirts with cuffs, long trousers, etc.)

8.6. Special means of protection and hygiene:

Observe usual personal hygiene.





9. Chemical-physical properties.

9.1. Appearance: fibres in yellow to white colour connected in parallel strips

9.1.2. Smell:

9.2. Important data related to safety:

9.2.1. Boiling point (°C): not applicable

9.2.2. Ignition temperature (°C): non-flammable

9.2.3. pH value: not applicable

9.2.4. Inflammability (EG A10/A13): non-flammable

9.2.5. Ignition temperature: non-flammable

9.2.6. Self-ignition: non-flammable

9.2.7. Required properties:

9.2.8. Explosive properties [% of vol.] not applicable **limits of explosion:** not applicable

Thermal decomposition [°C]

9.3. Other data:

9.3.1. Specific gravity of pure glass: approximately 2.55 g/cm³

9.3.2. Solubility: not soluble in water, size and binding agents are soluble in styrene, acetone and methylo-ethylo-keton,

9.3.3. Partial pressure: not applicable

9.3.4. Vapour density: not applicable

9.3.5. Coefficient N-octanol/water: not applicable

9.3.6. Littleton softening point: approximately 850°C

9.3.7. Electrical conductivity: E glass is dielectric

9.3.8. Contents of volatile matter: size and binder decomposition in high temperatures:

mats - max. 12 %

other - max. 2,25 %

9.3.9. Evaporation: depending on type of product, the maximum humidity content equals 0,25%.

10. Stability and reactivity.

10.1. Circumstances to avoid: not known

10.2 Materials to avoid: not known

10.3 Dangerous products of decomposition: in case of long-lasting exposure to fire, there is a possibility that fire-induced products may be released from size and binder (see point 5)





11. Toxicological information.

These products are not classified as "dangerous" in the meaning of seventh amendment to the 67/548/EEC standard

11.1. Severe toxicity:

direct contact with glass fibre can cause irritation of skin, and rarely, pain of eyes, nose and throat.

11.1.1. Inhalation:

glass fibres can penetrate into human organism, mainly through respiratory tracts. Among fibres classified as able to penetrate into organism, are those with diameters below 3 µm. LRS Ltd produces only fibres with diameters equal or bigger than 6 µm, so they do not penetrate into organism. At the conference on toxicology held in Paris on 3-4 February 1994, it was reported that fibres which are not penetrating into organism cannot cause illnesses of respiratory tracts.

11.1.2. Ingestion:

11.1.3 Contact with skin:

glass fibre can cause irritation of skin,

11.1.4. Contact with eyes:

contact with glass fibre dust (particularly during glass fibre chopping) can cause eye irritation.

11.2. Effects of long-term exposure:

11.2.1. Mutagenic and carcinogenic effects;

Tests on animals exposed to glass fibres inhalation, did not show of carcinogenic reactions. Tests in which glass fibres were injected into organisms of test animals, had led to cancer. Because no glass fibre is ever injected into human body, the results obtained in the tests were not classified as having any relation to humans. The International Institute for Cancer Research has classified continuous glass fibres into group 3, ie. as non-carcinogenic substance. This means, that there is not enough evidence to relate cancerous diseases to glass fibres.

11.2.2. Narcotic activity:

not detected

11.3. Human experience:

Epidemiological investigations over many years on humans working in glass fibre production till the age of 40, did not allow to relate the increase in malignant and non-malignant respiratory tract diseases to the exposure to glass fibre.



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12. Ecological aspect.

Glass fibre is generally regarded as neutral to the environment, and should be treated as a neutral, solid waste. It is not necessary to use special rules for its disposal and storage. Local regulations should be obeyed. Glass fibre is not destructive to the ozon layer.

13. Consideration on disposal:

13.1. Reminders (wastes) of product: dispose of as solid waste neutral to the environment

13.1.1. Recommended: observe local regulations

13.1.2. Safe conditions: no special requirements

13.2. Dirty packagings:

13.2.1. Recommended: observe local regulations

13.2.2. Safe conditions: as in the case of remainders of product

14. Transport regulations

Covered transport vehicles should be used.

No special rules and restrictions for glass fibre transportation.

15. Information on regulations

Important information, from legal point of view, is included in EINECS under number 65997-17-3.

16. Other information.

