

Material Safety Data Sheet

Section 1: Product and Company Information

Product Name(s): HS2 Glass Fiber, HS4, Glass fiber, Chopped Strands

Manufacturer:

Sinoma Science-Technology Co., Ltd.

Attn: Marketing Department,

Add: 30 An De Li Nanjing 210012

Telephone: 86-25-85017626

Fax:86-25-52429647

E-mail: hsfiber@fiberglasschina.com

Section 2: Composition and Ingredient Information

HS2, HS4 glass fiber is sold as

Textile yarns

Rovings

Chopped strands

HS2 ,HS4 Glass is a silica aluminate glass

Composition: (oxide wt%)

SiO₂ 55~60 %

Al₂O₃ 24~27 %

MgO 11~16 %

Filament (non respirable)*

Nonrespirable filaments and particulate >98%

Respirable particulate <1%

Respirable particulate with fiber like

dimensions (glass shards) <0.002%

SIZE: Size is a mixture of chemicals applied to the glass strands in a maximum quantity of 2% ,Most of this mixture is made up of high molecular weight polymers, which are not listed as substances in the 1981 European Inventory of Existing Commercial Substances (EINECS) nor in the ELINCS appendices (European List of Notified Chemical Substances) nor in the American TSCA lists.

Section 3: Hazards Identification

HS2;HS4 glass fiber products are not significantly hazardous.

the essential point to remember is that the glass filaments are not “respirable” as they are over 3µm in diameter and have been shown not to cause lung cancer.

Appearance and Odor: white/yellow colored solid with no odor.

Emergency Overview

Primary Route(s) of Exposure: inhalation, skin, eye

Potential Health Effects:

Acute (short term): Fiberglass continuous filament is a mechanical irritant. Breathing dusts and fibers may cause short-term irritation of the mouth, nose and throat. Skin contact with dust and fibers may cause itching and short-term irritation. Eye contact with dust and fibers may cause short-term mechanical irritation. Ingestion may cause short-term 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. In a laboratory test of a different product with comparable composition and durability, animals breathing very high concentrations of respirable fibers on a long-term basis developed fibrosis, lung cancer and mesothelioma.

Section 4: First Aid Measures

Inhalation: Move person to fresh air. Seek medical attention if irritation persists.

Eye Contact: Flush eyes with running water for at least 15 minutes. Seek medical attention if irritation persists.

Skin Contact: Wash with mild soap and running water. Use a washcloth to help remove fibers. To avoid further irritation, do not rub or scratch affected areas. Rubbing or scratching may force fibers into skin. Seek medical attention if irritation persists.

Ingestion: Ingestion of this material is unlikely. If it does occur, watch the person for several days to make sure that intestinal blockage does not occur.

Section 5: Fire Fighting Measures

In case of fire, glass fibres are not flammable, are incombustible and don't support combustion.

Flash Point and Method: None

Flammability Limits (%): None.

Auto Ignition Temperature: Not Applicable.

Extinguishing Media: Water, foam, CO2 or dry chemical.

Unusual Fire and Explosion Hazards: None known.

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

Fire Fighting Instructions: Use self-contained breathing apparatus (SCBA) and full bunker turnout gear in a sustained fire.

Section 6: Accidental Release Measures

Personal protection: see section 8.

Environmental protection: in leaching tests HS glass fibre wastes did not emit any significant

quantities of dangerous products and they can therefore be considered as Inert Industrial Wastes, or even Common Industrial Wastes, as defined by national and local regulations.

Cleaning:

Vacuum clean, sweep or shovel into containers normally used for glass fibre waste (selective collection).

Section 7: Handling and Storage

Handling :For glass fiber products, it is preferable to avoid prolonged contact with the skin: wear gloves, garments with sleeves and long leggings or protective overalls, goggles, and dust masks.

Storage:

General: No special storage or handling procedures are required for this material.

Storage Temperature: Not applicable.

Storage humidity : less than 75%, store away from excessive humidity to prevent damage to the product and to the packing materials which could lead to storage safety problems.

Stack: less than 5 Tiers

Section 8: Exposure Controls and Personal Protection

Use every appropriate means (suction, modification of manufacturing methods to reduce fibre dust...) to try to reduce the concentration of fibres likely to cause irritation.

Test parameters

Test ambient atmospheres in which glass fibre is used regularly to determine levels of

. “non respirable” and “respirable” filaments

. “non-respirable” and “respirable” dusts.

Standards of Main developed countries

Country	dust	Weighted Average concentration) (mg/m ³ . for 8 hours work)	Fiber	Weighted Average concentration) (mg/m ³ . for 8 hours work)
France	total	10	respirable	1
Germany	respirable	3	respirable	0.25
U.K	respirable total	5 10	respirable	1
USA	respirable total	5(OSHA *) 10(OSHA *)	total	1(ACGIH * *)

*OSHA =Occupational Safety and Health Administration

**ACGIH=American Conference of Governmental Industrial Hygienists

As manufactured continuous filament glass fibers are not respirable. Continuous filament glass 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.

Personal protection:

Respiratory protection: During occasional operations releasing high quantities of dust, wear minimum FP1 or preferably FP2 EEC approved dust masks

Skin Protection: Loose fitting long sleeved shirt that covers to the base of the neck, long pants and gloves. Skin irritation is known to occur chiefly at pressure points such as around neck, wrist, waist and between fingers.

Eye Protection: Safety glasses, goggles or face shield.

Section 9: Physical and Chemical Properties

Physical state: solid

Form: bobbins of continuous fibres, chopped strands made up of continuous, parallel filaments glued together.

Colour: white or yellowish white

Odour: none

PH: not applicable

Softening point: littleton point (defined as the temperature for which the viscosity of glass is $10^{6.5}$ ~ 10^7 Pa.S) approximately 920~950°C

Melting point: not applicable.

Decomposition temperature: only size products start to decompose at 200°C

Flash point: none

Explosive properties: none

Density: 2.53-2.54 g / cm³

Solubility: very low solubility in water.

Sizes can be partially (and even totally) dissolved in most organic solvents.

Section 10: Stability and Reactivity

General: Stable

Incompatible Materials and Conditions to Avoid: None

Hazardous Decomposition Products: Sizings or binders may decompose in a fire.

Hazardous Polymerization: Will not occur.

Section 11: Toxicological Information

Cute toxicity: not relevant

Localised effects: possible temporary irritations this irritation is of a purely mechanical and temporary nature. It disappears when exposure is ended.

Sensitisation: some allergies to continuous strand In case of the allergy is confirmed, remove the person from the scene of the exposure.

Long term toxicity: carcinogenic risks

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

Regulatory situation: None of the following official organisations have attributed any risks of cancer during the production and use of continuous filament glass fibres: During its congress in June 1987, World Health Organisation (WHO) through the IARC (International Agency of Research on Cancer) examined all laboratory studies using animals and epidemiological studies carried out on glass yarns for textiles. The conclusion was that glass filaments are not classified as to their carcinogenicity. They belong to Group 3 of IARC classification. This classification has been confirmed by the IARC Working Group during his meeting of October 2001 and in the latest issue of the IARC monographs on the evaluation of carcinogenic risks to humans

Section 12: Ecological Information

This material is not expected to cause harm to animals, plants or fish.
Sizes or resins are organic materials slowly and only partial dissolved by natural agents like water. When the concentration of the ingredients in the mixture and ingredient solubility are low and as they have not been classified as hazardous, HS glass products are considered to have no adverse eco-toxicological effects.
sizing products and resins were not listed as products likely to destroy the ozone layer.

Section 13: Disposal Considerations

Depending on local regulations, glass fibre wastes can either be considered at inert waste or as common industrial waste. As such they can be buried in landfills approved for these categories. Glass fibres waste cannot be destroyed by incineration and can damage incinerators by the formation of a vitrified mass.
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).

Section 14: Transport Information

DOT Shipping Names: Not regulated

Section 15: Regulatory Information

HS glass fibre products do not require hazardous product labeling.

16 - OTHER INFORMATION

Nothing to notice