



SAFE USE INSTRUCTION SHEET

Creation Date 18-Feb-2020

Revision Date 18-Mar-2024

Version 1

0. General Information

This Safe Use Instruction Sheet is the document provided by Neuvokas Corporation to communicate recommended safe handling and use instruction for articles not regulated by OSHA Hazard Communication Standard, 29 CFR 1910.1200

1. IDENTIFICATION

Product Name Fiberglass Rebar

Synonyms Glass Fiber Reinforced Polymer Bar, FRP Rebar, GFRP Rebar, GatorBar

Recommended Use Industrial and professional use: reinforcement of concrete structures.

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2. HAZARDS IDENTIFICATION

Regulatory Status This product is not classified as hazardous according to OSHA Hazard Communication Standard, 29 CFR 1910.1200.
These products are articles
Articles which meet the definition of 29 CFR 1910.1200 (b)(6)(v) (a manufactured item other than a fluid or a particle: (i) which is formed to a specific shape or design during manufacture; (ii) which has an 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 in paragraph (d) of this section), and does not pose a physical hazard or health risk to employees) are not regulated by OSHA HazCom Standard

Other Information May cause skin abrasion in case of direct manual handling
When being cut or ground these products may release dust (Particles Not Otherwise Regulated), See Section 8 for Exposure Limit Data.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Comments Fiberglass Rebars are made of ca. 70 - 80% (w/w) of Continuous Filament Glass Fibers and ca. 20 - 30% (w/w) of cured thermoset resin coated by a thermoplastic film. They are available in the form of cylindrical rebars, of several nominal diameters and lengths.

4. FIRST AID MEASURES

Description of First Aid Measures

- Eye contact**
 - DO NOT rub or scratch eyes
 - Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes
 - If eye irritation persists: Get medical advice/attention
- Skin contact**
 - DO NOT rub or scratch affected area
 - Wash off immediately with soap and plenty of cold water
 - If skin irritation persists, call a physician
- Inhalation**
 - Inhalation of this product is unlikely
- Ingestion**
 - Accidental release of this product is unlikely

5. FIRE-FIGHTING MEASURES

- Flammable properties**
 - Only the hardened thermoset resin and a thermoplastic film coating are combustible and could release small quantities of hazardous gas in case of major and prolonged heat or fire. Glass fibers are not flammable, are incombustible and do not support combustion. Avoid exposing the product to open flames.
- Suitable extinguishing media**
 - Use CO2, dry chemical, or foam
 - Water spray or fog
- Protective equipment and precautions for firefighters**
 - As in any fire, wear self-contained breathing apparatus (SCBA) and full fire-fighting protective gear

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions**
 - Accidental release of this product is unlikely
- Methods for cleaning up**
 - Accidental release of this product is unlikely

7. HANDLING AND STORAGE

- Precautions for safe handling**
 - Prevent and/or minimize dust formation
 - Wear appropriate personal protective equipment in case of direct contact with the product
- Storage Conditions**
 - Do not store Fiberglass Rebars directly on ground. Place timber pallets under bars to keep them free from dirt & mud and to provide easy handling. Store Fiberglass Rebars under covers to avoid direct sunlight & other chemical substances contact.
 - Keep away from open flames and other ignition sources.
- Incompatible materials**
 - None known

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

There is no Occupational Exposure Limit directly associated with Fiberglass Rebars, except airborne nuisance dust which may occur under certain process conditions (e.g. cutting and grinding)

| Chemical name | ACGIH TLV | OSHA PEL | NIOSH REL |
|--|--|----------|-----------|
| Continuous filament glass fiber, non-respirable - | TWA: 1 fiber/cm ³ respirable fibers: length >5 μm, diameter less than 3 μm, aspect ratio >=3:1, as determined by the membrane filter method at 400-450X magnification [4-mm objective], using phase-contrast illumination TWA: 5 mg/m ³ inhalable particulate | - | - |

NIOSH REL: No established REL

OSHA PEL: TWA for Inert or Nuisance Dust are: 5 mg/m³ (Respirable fraction) and 15 mg/m³ (Total dust)

Engineering Controls If and when cutting or grinding Fiberglass Rebars in confined spaces provide local exhaust and/or general ventilation to maintain exposure below applicable occupational exposure limits

Individual protection measures, such as personal protective equipment

- Eye/face protection**
 - Avoid contact with eyes
 - Personal Protective Equipment usually used on Construction jobsite are appropriate
- Skin and body protection**
 - Avoid contact with skin
 - Wear protective gloves
 - Personal Protective Equipment usually used on Construction jobsite are appropriate
- Respiratory protection**
 - If and when cutting or grinding Fiberglass Rebars in confined spaces provide local exhaust and/or general ventilation to maintain exposure below applicable occupational exposure limits

General Hygiene Considerations •Wash hands before breaks and immediately after handling products

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state Solid
Appearance In the form of cylindrical bars, of various diameter (3/8 to 5/8 in)
Odor Odorless
Color Clear to amber
Water solubility Insoluble in water
Density ca. 2.1 (H₂O = 1)
Explosive properties Not an explosive
Decomposition temperature The hardened thermoset resin starts to decompose at about 220°C

10. STABILITY AND REACTIVITY

Stability •Stable under normal conditions
Possibility of Hazardous Reactions •None under normal processing conditions
Hazardous Decomposition Products •None under normal use conditions
 •Small quantities of undetermined hazardous decomposition products may be released in case of heat exposure or during a fire

11. TOXICOLOGICAL INFORMATION

Product Information Under normal conditions of use no health effect is anticipated. Dusts and fibers may cause temporary skin and mucous membranes itching due to mechanical abrasion effect of fibers. Mechanical abrasion is not considered as a health hazard in the meaning of the UN Globally Harmonized System of Classification and Labeling of Chemicals (GHS). Inhalation may cause coughing, nose and throat irritation and sneezing. High exposures may cause difficult breathing, congestion and chest tightness

Components Information Continuous filament glass fibers are not respirable according to the World Health

Organization (WHO) definition. Respirable fibers have a diameter (d) smaller than 3µm, a length (l) larger than 5µm and a l/d-ratio larger than or equal to 3. Fibers with diameters greater than 3 microns, which is the case for continuous filament glass fiber, do not reach the lower respiratory tract and, therefore have no possibility of causing serious pulmonary disease. Continuous filament glass fibers do not possess cleavage planes which would allow them to split length-wise into fibers with smaller diameters, rather they break across the fiber, resulting in fibers which are of the same diameter as the original fiber with a shorter length and a small amount of dust. Microscopic examination of dust from highly chopped and pulverised glass demonstrated the presence of small amounts of respirable dust particles. Among these respirable particles, some were fiber-like in terms of l/d ratio (so-called "shards"). It can be clearly observed however that they are not regular shaped fibers but irregular shaped particles with fiber-like dimensions. To the best of our knowledge, the exposure levels of these fiber-like dust particles measured at our manufacturing plants are of the order of magnitude between 50 to 1000 below existing applicable limits

ACGIH (American Conference of Governmental Industrial Hygienists) Continuous filament glass fibers are classified as A4 - Not Classifiable as a Human Carcinogen

IARC (International Agency for Research on Cancer) The International Agency for Research on Cancer (IARC) in June, 1987, and in October, 2001 (see IARC Monographs on the Evaluation of Carcinogenic risks to humans - Man-made Vitreous Fibers - Volume 81), categorized continuous filament fiber glass as not classifiable with respect to human carcinogenicity (Group 3). The evidence from human as well as animal studies was evaluated by IARC as insufficient to classify continuous filament fiber glass as a confirmed, probable or even possible cancer causing material

NTP (National Toxicology Program) Continuous filament glass fibers are not listed in the National Toxicology Program (NTP) Report on Carcinogens (latest edition)

Classification according to Regulation (EC) No. 1272/2008 [CLP] Continuous filament glass fibers are not listed in the Table of harmonized classification entries in Annex VI to CLP Regulation.

12. ECOLOGICAL INFORMATION

This product is not expected to be hazardous for the environment

13. DISPOSAL CONSIDERATIONS

Disposal should be in accordance with applicable regional, national and local laws and regulations

14. TRANSPORT INFORMATION

These products are not classified as dangerous goods according to international transport regulations

15. REGULATORY INFORMATION

International Inventories These products are articles. Articles are exempted from registration or listing under chemicals inventories like TSCA (USA), DSL/NDL (CAN), REACH (EU), ENCS (JP), IECSC (CN), KECL (KR), PICCS (PH), AICS (AUS)

California Proposition 65 This product can expose you to chemicals including those listed below, which is [are] known to the State of California to cause cancer, birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

| Chemical name | California Proposition 65 |
|---------------|---------------------------|
| N/A | N/A |

16. OTHER INFORMATION

Prepared By Neuvokas Corporation

Creation Date 18-Feb-2020
Revision Date 18-Mar-2024
Revision Note New document

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End of Safe Use Instruction Sheet