



**GAVAZZI TESSUTI TECNICI S.p.A. (Socio Unico)**

Sede Centrale / Headquarter: Via Gavazzi, 3 - 23801 Calolziocorte (LC) – ITALIA

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**SAFE USE INSTRUCTIONS SHEET**

**INTRODUCTION:** the European Regulations on chemical products N° 1907/2006 (REACH) that came into force on June 1st 2007 demands Safety Data Sheets solely for dangerous substances and compounds.

Our **para-aramid fiber and fiberglass continuous filament coated products** correspond to REACH, and for this reason, there is no need to supply any Safety Data Sheet.

Gavazzi Tessuti Tecnici S.p.A. (Socio Unico) however, wants to give its clients through this document all necessary information for handling and usage of the **coated products** in absolute safety.

1. IDENTIFICATION OF THE PRODUCT AND OF THE COMPANY:

Trade name : **Para-aramid fiber , E fiberglass and AR fiberglass coated fabric**  
Product end use : **Product used as reinforcement**

Address and phone

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2. HAZARDS IDENTIFICATION

The product is not made of substances classified as dangerous

3. COMPOSITION/INFORMATION ON INGREDIENTS

Common name	CAS No.	Legal limit (weight %)	Content (weight %)
Fiberglass yarn	65997-17-3	NA	See technical data sheet
Para-aramid fiber yarn	26125-61-1	NA	See technical data sheet
Formaldehyde	50-00-0	< 0,1	< 0,1
Styrene	100-42-5	< 0,1	< 0,1
Oxide of Antimony	1309-64-4	< 1,0	< 1,0
Vinil Acetate	108-05-4	< 0,1	< 0,1

Notes:



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The constituent filaments of **fibreglass** have a nominal diameter  $\geq 6 \mu\text{m}$  and are not respirable. The article, in the application phase, if cut, ground or under any other action (for example physical, mechanical or chemical) can release a little quantity of respirable particles. Please check Section 8 of the Safety Data Sheet on exposure limit.

The sizing is a mixture of not reactive polymers with high molecular mass, usually with natural ingredients (starches) without reactive groups, which are not mentioned as substances in the attachments VEICNES or ELINCS.

In some cases, the sizing is a preparation of polymers with reactive groups or containing reactive monomers that are listed on the a.m. sheets. The most part of the reactive groups are polymerized in the production process of the E glass yarn.

Another type of additive (occasionally present in almost all type of sizings) belongs to the family of the organic silanes. These products have a value inferior to 0,005% of the quantity of the final weight of glass E with the sizing. These products are quoted on the lists of products that in the rough require the identification of “dangerous product” (in Europe the sentence is R23/25 – H301/H331 toxic in case of inhalation and toxic in case of ingestion R21 – H315 harmful in case of skin contact, R36 – H319 irritating for the eyes).

For the preparation of the sizing, it is possible to use other products, which very often act as lubricant.

Their content is usually very low (less than 0,1% of the total mass). Normally these products are not listed as dangerous. As an alternative the risk is considered as negligible because the products have already reacted.

The **para-aramid** continuous filament can contain up to 1,2% of a fiber finish. If the product is intended for special applications, e.g. in the food industry, please consult the manufacturer prior to application. In cases where the product is heat-treated at temperatures of between 130 and 190 °C, the applied fiber finish may evaporate or decompose. The finishes, like coning oils or sizing agents, can generally be removed in an aqueous medium. If water is used for further treatments, the waste water generated by the process must be treated in a water purification plant in compliance with local regulations.

The para-aramid fibers have the capacity to reduce their diameter – as a result of abrasion or stress and can present respirable fibrils.

**Coatings** used for finishing are of different chemical nature depending on the destination of use of the product:

- Reinforcement for abrasive: acrylonitrile- styrene-butadiene polymer
- Reinforcement for ceramic/marble : vinyl acetate polymer, styrene-butadiene polymer
- Reinforcement for building : styrene-butadiene polymer or acrylic polymer with possible addition of flame retardant.
- Reinforcement for adhesives : acrylic polymer
- Reinforcement for the wind energy sector: ethylene-vinyl acetate polymer



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- Reinforcement for the marine industry: ethylene-vinyl acetate polymer
- Filtration: acrylic polymer

Based on the information received from suppliers of chemicals and based on our knowledge we declare that the above mentioned coatings are not hazardous due to the substances contained in them or the quantities of dangerous substances contained in them. Furthermore the manufacturing process reduces the presence of hazardous substances.

Our products do not contain substance of very high concern (SVHC).

#### 4. FIRST-AID MEASURES

No specific measure is required. However, in case of:

- **Excessive Inhalation:**  
Move person to fresh air. Seek medical attention if irritation persists.
- **Skin Contact:**  
Wash with mild soap and cold water. Do not wash with warm water because this will open up the pores of the skin, which will cause further penetration of the fibers. To avoid further irritation, do not rub or scratch affected areas. If irritation persists get medical attention.
- **Eye Contact:**  
Immediately flush eyes with plenty of running water for a few minutes. If irritation persists get medical attention.
- **Ingestion:**  
Ingestion of this material is unlikely. If it does occur, consult a doctor.

#### 5. FIRE FIGHTING MEASURES

In case of fire our products emit fumes, oxides and harmful substances. The packaging materials (film, plastic foil, paper, cardboard, wood) are flammable.

The combustion gasses are basically carbon dioxide, hydrocyanic acid, sulfuric acid, halogens and steam. There could be small quantities of carbon monoxide and other substances which require the use of protection devices in case of fire of relevant size. Recommended extinguishing media: Water, powder extinguisher, foam and carbon dioxide.

#### 6. ACCIDENTAL RELEASE MEASURES:

Precautions for personal safety:	No particular recommendation under normal conditions of use.
Environmental precautions:	Vacuum or sweep material and place in a waste-container properly labeled. Non recyclable wastes should be disposed of through an approved waste handling company
Cleaning and collect methods:	Wet methods or vacuum systems should be used.



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**7. HANDLING AND STORAGE**

- Handling: - Wear protective equipment in case of direct contact with the product (see section 8)  
- Avoid and/or minimize the dust formation.
- Storage: The product should be sheltered from atmospheric agents and exceedingly humid locations.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION:**

Exposure limits:

- Fiberglass:

Ingredient	OSHA PEL	ACGIH TLV
	(8-hr TWA)	(8-hr TWA)
Non-respirable fibers and particulate	15 mg/m <sup>3</sup> (total dust)	5 mg/m <sup>3</sup> (inhalable fraction)
Respirable particulate	5 mg/m <sup>3</sup> (respirable dust)	3 mg/m <sup>3</sup> (PNOC)*
Respirable fibers	None Established	1 fiber/cm <sup>3</sup> (aspect ratio >5:1)
Sizing	None Established	None Established

\* = PNOC not otherwise classifiable particles

- Para-aramid fibers:

The para-aramid fibers have the capacity to reduce their diameter – as a result of abrasion or stress and can present respirable fibrils.

Professional exposure control

Technical measures

It is necessary to realize a local extraction and/or general ventilation aimed to maintain low the exposure levels. A dust collection system has to be used in every transfer process, cutting, manufacturing process, or any other process that generates dust.

Individual protection devices

When workers are exposed to higher concentration than what foreseen on the exposure limits, they must wear:

- Proper or homologated masks (FFP1 or FFP2 in function to the concentration of the dust in the air).
- Safety goggles with side protections.
- Gloves
- Long sleeves shirt, trousers.



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It is also necessary to follow hygienic industrial procedures.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Colour:	Different colors
Physical state:	Solid
Water solubility:	Slightly soluble in water. Partially soluble in organic solvent.
Specific gravity (glass in mass):	2,6 g/cm <sup>3</sup>
Specific gravity (aramidic in mass):	1,44 g/cm <sup>3</sup>
Melting point (E-AR Glass):	at approx. 800° C
Decomposing temperature (aramidic):	500° C
Decomposing temperature (sizing)	Some components decompose at 110° C, the most part at 200° C

**10. STABILITY AND REACTIVITY**

Stability: It is a stable product if recommended storage and handling conditions are applied (see section 7).

Conditions to avoid: Exposure to UV rays cause the darkening of the yellow colour of the fibres and negatively affect their resistance.

Incompatible materials: Strong acids and strong bases cause chemical decomposition of the finishing if left to react for a long time.

Dangerous decomposition products: sizing can decompose in case of fire. See Section 5 for information regarding dangerous combustion products.

**11. TOXICOLOGICAL INFORMATION**

Fiberglass:

Dust can cause eye and skin irritation. The ingestion can cause throat, stomach and gastrointestinal irritation. Inhalation can cause cough, nose, throat irritation and sneezing. People with respiratory pathologies could experience respiratory difficulties, congestion and feel thorax constraint.

In June 1987 (International Agency for Cancer Research) has classified the fiberglass continuous filament as not carcinogenic for humans (Group 3). The results of studies on humans and animals have been judged as not sufficient, according to IARC, to classify continuous yarns fiber glass as carcinogenic (even if it is under category possible, probable or sure). These results have been confirmed by IARC in October 2001.

The American Conference of Governmental Industrial Hygienists (ACGIH) has classified the fiberglass continuous filament as possibly carcinogenic for humans but not enough data are available



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to prove it. Studies in vitro or on animals do not give enough results to classify this product as carcinogenic.

Para-aramid fibers:

Acute effects:

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Poly-(para-phenylene-terephthalamide)	>7500 mg/Kg (Rat)		

The fiber product (polymer) is non-toxic.

Usually the fibers are treated with about 1% sizing.

All additives are non-toxic according to the safety datasheets of their manufacturers.

The following information does not relate to the intact fibers but only to respirable, fiber-shaped particulates (RFP), which may be found in small numbers in the workplace atmosphere due to abrasive processing.

RFP are fragments with diameters of less than 3 µm, lengths up to 100 µm and a length/diameter ratio of at least 3:1. Short term and subchronic (3 months) inhalation studies in rats and hamsters with an extended follow-up to nine months have demonstrated that p-Aramid RFP are not biopersistent. Long p-Aramid RFP are quickly transversely broken into smaller fragments and then removed from the lung. However, extremely high amounts of inhaled p-Aramid RFP may inhibit the clearance mechanism. 25 RFP/ml of air has been established as the "no observed adverse effect level" in subchronic study. The inhalation of big concentration of RFP causes lung inflammation in hamsters and rats and in these last overlaid phenomenon. An exposition lifelong to concentration from 100 up to 400 RFP has caused lung fibrosis in the rats. Fibrosis is reversible if exposure is stopped. No malignant tumors resulted from the lifelong inhalation tests in rats. Instead, proliferative cystic tissue changes were observed in rats after exposure to particulates. They occur mainly in (female) rats and have never been observed in human beings. These cysts were subject of scientific debate for an extended period of time, but current consensus holds that they are not malignant and that their occurrence in animals has no relevance to humans.

Intraperitoneal injections of excessive quantity of para-aramid RFP have increased marginally the number of mesothelioma. The validity of the intraperitoneal test for the prognostication of the carcinoma is doubtful. Light skin irritation has been observed sometimes (See section 4).

The coating

Some substances contained in the sizing have specific toxicity values as indicated at point 3. For future updates, please refer to scientific progress, and possible future regulation.

**12. ECOLOGICAL INFORMATION**

The product is not biodegradable. Do not release into the environment. See points 6 and 13 for correct disposal.



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### 13. CONSIDERATIONS ON WASTE DISPOSAL

Fibre glass and para-aramid wastes are not considered dangerous.

Whenever possible, generation of wastes should be avoided or reduced to minimum.

Non recyclable wastes and scraps should be disposed of through local agencies or authorized companies.

Disposal of this type of wastes, of its by-products and dilutions should take place according to the local regulations and law pertaining environmental protection and rubbish disposal and the requirements of the local authorities.

In the present knowledge of the supplier, this product is not considered as hazardous waste as defined by EU Directive 91/689/EC.

### 14. TRANSPORT INFORMATION

Our articles are not considered hazardous goods requiring special transport procedures.

### 15. REGULATORY INFORMATION

According the Directive (CE) 1272/2008, fiberglass continuous filaments are not classified as carcinogenic and this Directive does not apply to fiberglass continuous filaments, due to the fact that is not about “random orientation fibre”.

Our articles are not classified as dangerous products according to Directory (CE) 1272/2008.

### 16. ADDITIONAL DATA

Some vitrifiable raw materials of AR glass may be slightly radioactive. The presence of uranium and thorium is less than 500 ppm with a specific activity of less than 20 Bq/g.

All information contained herein are based on our state of knowledge at the above-specified date with reference to the correct use of the product.

Consequently GAVAZZI TESSUTI TECNICI S.p.A. (Socio Unico) declines any responsibility in case of incorrect or improper use of the product.

This data sheet cancels and replaces any previous release.

Release date 18/03/2016

This release supersedes any previous one.