

## SAFETY DATA SHEET

valid for all glycerinated cut carbon fibres

in accordance with regulation (EC) N°1907/2006 – REACH

### 1 – PRODUCT AND COMPANY IDENTIFICATION

Product name	CARBISO™ C / CF.G
Relevant uses	rubber belts, thermosetting composites, textile yarns, paints, non-wovens, ablatives and friction materials
Uses advised against	None
Company name	APPLY CARBON S.A.S.
Address	ZA Lanveur F-56440 LANGUIDIC FRANCE
Telephone number	+33 2 97 65 10 89

### 2 – HAZARDS IDENTIFICATION

Main product risks	<b>Electricity conducting material.</b> Airborne fibres can short circuit electrical equipment. <b>Our carbon fibers are NOT ATEX nor hazardous.</b>
Human health risks	Fine dust may irritate skin, eyes and mucous membranes. No case of disease reported.
Environmental risks	Known as a non-polluting product, but which may cause <b>electrical short circuits</b> when dispersed.
Specific risks	None

*This product is an **ARTICLE** that is **NOT classified as hazardous** according to the decree of 07/12/2009, or regulations (EC) n°1272/2008 (CLP), 67/548/EEC and 1999/45/EC.*

### 3 – COMPOSITION / COMPONENT INFORMATION

Substance/mixture	> 92% of carbon fiber (in graphite form)
Standard or chemical name	<b>Carbon fibre on basis polyacrylonitrile (PAN)</b>
CAS number	7440-44-0
EINECS/ELINCS number	Polymer (231-153-3)
GHS/CLP or hazard symbols	<b>Not classified</b>
R-phrase	Not applicable
Substances of Very High Concern (SVHC)	None or below 0.1%
CMR	None or below 0.1%
Glycerin	~3.6% (not hazardous – CAS n° 56-81-5)
Other components	Sizing (Epoxy or polyether resins) ≤ 1.8 %

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### 4 – FIRST AID MEASURES

General advice	Dust may be irritating. Change clothing.
Eye contact	Rinse thoroughly with plenty of water for at least 15 min and seek medical advice.
Skin contact	Wash thoroughly with water and soap.
Inhalation	Remove subject to fresh air. Seek medical attention if symptoms persist.
Ingestion	Rinse mouth and drink water. No medical treatment required but seek medical advice.

### 5 – FIRE-FIGHTING MEASURES

Suitable extinguishing media	All usual extinguishing products appropriate for the surrounding fire are allowed. Avoid full water jet.
Specific hazards	Not flammable or combustible under normal uses. Risk of formation of toxic pyrolysis products (CO).
Special protective equipment for firefighters	Wear full-face, self-contained breathing apparatus to avoid inhalation of fumes or decomposition products.
Specific methods	None.

### 6 – ACCIDENTAL RELEASE MEASURES

Individual precautions	Use an individual protection equipment.
Environmental precautions	Avoid worsening the dispersion. Prevent entry into waterways, sewers, basements or confined areas.
Cleaning methods	Avoid dust formation. Clean up with sweep or vacuum.

### 7 – HANDLING AND STORAGE

Handling precautions	Keep away from sources of ignition – <b>no smoking</b> . Avoid the dispersion of discharging loose fibres into open air. Wash thoroughly after handling. No electrical appliances or protect them in sealed or pressurised cases. Insulating varnish may be applied to electronic boards and electrical terminals.
Technical measures	<b>Electrical conducting material</b> – do not cut the carbon fibre unnecessarily – <b>DO NOT ALLOW CONTACT WITH ELECTRIC CURRENT SOURCES.</b>
Storage	Store in a cool (<50°C), dry and well-ventilated area.

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### 8 – EXPOSURE CONTROLS / INDIVIDUAL PROTECTION

Engineering measures	Ensure adequate ventilation on workstation to avoid dust accumulation.
Control parameters	See local regulations. VME for total dust: 10 mg/m <sup>3</sup> . Long-term exposure for carbon fibres: 0.5 mg/m <sup>3</sup> or 0.5 RFP/ml (respirable fibre-shaped particles).
Personal protective equipment: <i>Respiratory protection</i>	Use appropriate certified breathing apparatus in the event of high concentrations (poor ventilation, fine dust production). Filter apparatus FFP2 or FFP3.
<i>Skin/hand protection</i>	Gloves and protective clothing. Avoid skin contact.
<i>Eye protection</i>	Safety glasses with side shields or face protection.
Hygiene measures	Wash face and hands before eating, drinking or smoking and do it in separate areas. Use barrier skin cream or baby cleaning milk to wash hands and face.

### 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical state	solid
Form	<b>short fibre (filament)</b>
Colour	black or charcoal grey
Odour	none
pH	not applicable
Boiling point	not applicable
Melting point	> 2760 °C or 5000 °F
Vapour pressure/ Vapour density	not applicable
Specific gravity (filament)	1.7 to 2.0 g/cm <sup>3</sup>
Bulk density (short fibres)	0.1 to 0.6 kg/dm <sup>3</sup> depending on the fibre, depending on its length and the sizing type.
Flash point	no information available
Viscosity	no information available
Flammability	not applicable
Autoignition temperature	not applicable
Oxidizing properties	none
Decomposition temperature	> 650 in air, > 290 in preparation
Solubility in water and solvents used	insoluble fibre – sizing agent is normally soluble in hot water
Partition coefficient (n-octanol/water)	no information available

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### 10 – STABILITY AND REACTIVITY

Stability	Stable.
Conditions to avoid	See section 7. <b>Avoid contact with heat, flame, spark.</b>
Hazardous reactions	Reactions with strong oxidizing agents. In the supplied form our product is not explosive however the processing and buildup of fine dust can lead to a risk of dust explosion (accumulation of fine dust in a closed area).
Hazardous decomposition products	Oxides of carbon (CO, COx).

### 11 – TOXICOLOGICAL INFORMATION

Acute toxicity	Product presumed <b>non toxic</b> .
Local effects	Carbon fibres and dust may cause mechanical irritation of the eyes, skin, nose and throat.  The filament is not breathable (IARC). None carbon fibres with diameter below 3.5 µm ( $\geq 7$ µm) and length below 80 µm, therefore they are not considered as “respirable fibre-shaped particles” (RFP $\leq 3.5$ µm diameter).

### 12 – ECOLOGICAL INFORMATION

Ecotoxicity	This material is <b>not classified as dangerous</b> for the environment. Ecological data are not available.
Persistence and degradability	Non-polluting, stable product.
Mobility in soil	No information available.
Bioaccumulation	No information available.
PBT/vPvB	These products are not classified as PBT or vPvB.

### 13 – DISPOSAL CONSIDERATIONS

Waste disposal	Dispose of wastes in a suitable place according to local regulations – do not incinerate. Incineration may cause carbon fibre particles to be dispersed into the air which may damage electrical equipment.
Treatment of contaminated packaging	Packaging that cannot be cleaned should be disposed of as for product.

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### **14 – TRANSPORT INFORMATION**

Carbon glycerinated products are **not classified as dangerous** in terms of national and international transport regulations – **no specific transport label required (not ADR). Not CLP-classified nor GHS classified.**

### **15 – REGULATORY INFORMATION**

These products **are not** submitted to regulations (EC) n°1272/2008 (CLP), 67/548/EEC, nor n°1999/45/EC. This MSDS has been established in accordance with REACH regulations (EC) N°1907/2006 and N°453/2010. Our products **don't contain** substances of very high concern (SVHC, REACH: EC 1907/2006 & 453/2010) or substances submitted to authorization (ANNEX XIV, REACH) or substances in current GADSL.

These products comply with **TSCA** (USA), **DSL/NDL** (Canada), **EINECS/ELINCS** (Europe), **REACH UK** (UK), **CH INV** (Switzerland), **IECSC** (China), **ENCS** (Japan), **KECL** (Korea), **TCSI** (Taiwan), **NZIoC** (New Zealand) and **AICS** (Australia) regulations.

### **16 – OTHER INFORMATION**

We believe that the information contained in this safety data sheet is correct to the best to our knowledge. However, the information contained in this sheet is not exhaustive. This safety data sheet does not anticipate all the circumstances in which the product may be used, nor all the physical and mental characteristics of each individual responsible for its transport or transformation. It is the duty of the user to test and use this product safely, in accordance with the laws and regulations in force. Unless otherwise stated in writing, we accept no responsibility for complaints or damage caused related to the use of this product. For all additional information, please contact the QSE Department of Apply Carbon.

***Apply Carbon transforms the carbon fibres only by cutting, chopping or milling, at very various lengths, to meet the very large needs of its customers.***

***Apply Carbon sometimes also mixes different carbon fibres for specific applications or customers' requirements.***

***All the information given in this Material Safety Data Sheet are obtained from these of its carbon fibres suppliers (TORAYCA, TOHO-TENAX, CYTEC...).***