

## TECATEC PA6 Carbon

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### 1. Identification of the article and of the company

**Trade name:**

TECATEC PA6 CFX XYYY IP VXX natural, TECATEC PA6 CFX XYYY IP VXX black,  
TECATEC PA6 CFX XYYY OS VXX natural, TECATEC PA6 CFX XYYY OS VXX black,  
TECATEC PA6 CWXX PL VXX natural, TECATEC PA6 CWXX PL VXX black

**Application:**

Semi-finished engineering plastics, finished parts

**Note:**

The present product is an article in the sense of regulation (EC) No 1907/2006 (REACH).

**Supplier:**

Ensinger GmbH  
Wilfried-Ensinger-Straße 1  
D - 93413 Cham  
Tel. +49 9971 396 0  
www.ensingerplastics.com

**Competent person:**

phib@ensingerplastics.com

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### 2. Hazards identification

**Classification and labelling:**

The product is not classified and doesn't need any labelling.

**Other hazards:**

Carbon fiber is an electricity conducting material. Carbon fiber dust may cause electrical short-circuits when contacted to electrical devices.

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### 3. Composition/information on ingredients

**Description:**

Article based on polyamide 6 (PA 6), CAS No 25038-54-4.  
Containing carbon woven.  
Possibly containing additives and processing aids.

**Information on ingredients:**

The product doesn't contain any substance, which is supposed to be released under normal or reasonably foreseeable conditions of use.

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### **4. First aid measures**

**After inhalation:**

After inhalation of product dust or thermal decomposition products, remove person from the danger zone. Fresh air, oxygen supply, apply artificial respiration if necessary. Keep quiet and warm and seek medical help.

**After skin contact:**

In case of skin irritation caused by carbon fibres, wash skin thoroughly with cold water. Do not use warm water, as this will open the pores of the skin, thus enabling the fibres to enter more deeply. Do not rub or scratch. Remove contaminated clothing. In the event of persisting skin irritation seek medical help.

**After eye contact:**

If a foreign body (splinter, chip) enters the eye do not rub. Immobilize the eye, cover both eyes with bandages, consult an eye specialist.

**Indication of any immediate medical attention and special treatment needed:**

Treat symptomatically.

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### **5. Firefighting measures**

**Suitable extinguishing media:**

Water spray, alcohol-resistant foam, carbon dioxide, dry chemical foam.

**Unsuitable extinguishing media:**

Water jet.

**Special hazards arising from the article:**

With carbonization and incomplete combustion toxic gases develop, predominantly carbon dioxide and carbon monoxide. The development of further fission and oxidation products is dependent on the conditions of burning. Traces of other toxic substances may develop under certain conditions of burning.

The release of dense black smoke, nitrogen oxide, amines, nitriles, ammonia, aliphatic and aromatic hydrocarbons, aldehydes, caprolactam, organic acids and hydrogen cyanide is possible.

When the product is burnt, fine carbon fibre particles may be produced. They may cause electrical short-circuits when contacted to electrical devices.

**Advice for firefighters:**

If exposed to fumes and carbonization gases during fire-fighting measures, rescue operations and cleanup wear a self-contained breathing apparatus.

The product ignites in a flame and continues to burn on removal of the source.

In an advanced state of fire, the molten polymer must be cooled with water. Water used to extinguish the fire and fire remainders must be collected and water disposed of, in accordance with local regulations.

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### **6. Accidental release measures**

**Personal precautions, protective equipment and emergency procedures:**

No special measures necessary.

**Environmental precautions:**

No special measures necessary.

**Methods and material for containment and cleaning up:**

Mechanical cleaning up.

Avoid dry sweeping. Use an appropriate suction device for cleaning to avoid the generation of dust.

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### **7. Handling and storage**

**Precautions for safe handling:**

Avoid overheating of material by improper handling. The "Ensinger machining recommendations for semi-finished engineering plastics" are to be observed.

Mechanical processing should generate as little dust as possible. Local exhaust ventilation is recommended to avoid the release of fibers into the work area.

Otherwise, good ventilation should be ensured and there should be no electrical equipment in the room or it should be protected in such a way that a short circuit by released fibers is prevented.

Insulating varnish may be applied to electronic boards and electrical terminals.

General industrial hygiene regulations are to be observed.

Wash hands before breaks and at the end of workday.

Tobacco should not be kept in the workplace.

Do not eat, drink or smoke in the workplace.

**Conditions for safe storage, including any incompatibilities:**

The appropriate company regulations for fire prevention are to be followed.

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### 8. Exposure controls/personal protection

**Control parameters:**

In case of mechanical processing the general limit for dust is valid.

**Exposure controls:**

The working area should be well ventilated.

**Respiratory protection:**

Wear protective breathing apparatus in case of dust exposure and/or insufficient ventilation. Wear dust mask filter type P3 or FFP3 (DIN EN 143/DIN EN 149).

**Eye/face protection:**

For mechanical operations wear safety glasses with side pieces or fully closed and tight-fitting goggles (DIN EN 166).

**Hand protection/skin protection:**

Skin protection should be used (barrier cream containing tanning agent).

For mechanical processing of carbon fibre reinforced products loose fitting, tight work clothes should be worn.

Persons sensitive to carbon fibres should wear leather protective gloves (DIN EN 388).

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### 9. Physical and chemical properties

**Appearance:**

solid (semi-finished parts/plates)

**Melting point/Melting range:**

ca. 218 °C

**Relative density:**

ca. 1,5 g/cm<sup>3</sup>

**Flash point:**

N/A (solid)

**Explosive properties:**

N/A

**Solubility(ies):**

insoluble (water, 20 °C)

**Odour/odour threshold:**

product-specific

**Initial boiling point and Boiling range:**

N/A (solid)

**Decomposition temperature:**

> 300 °C

**Flammability (solid, gas):**

> 400 °C

**Vapour pressure:**

N/A (solid)

**Partition coefficient: n-octanol/water:**

N/A

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### **10. Stability and reactivity**

**Chemical stability:**

Product is stable. No hazardous reactions known when stored and handled according to instructions and used for its intended purpose.

**Conditions to avoid:**

Do not heat to a temperature above the melting or decomposition temperature.

**Incompatible materials:**

Strong acids and strong oxidizing agents.

**Hazardous decomposition products:**

No decomposition and hazardous reactions known when handled according to instructions.

By strong overheating of the material carbon monoxide, nitrogen oxides, caprolactam and traces of hydrogen cyanide can be generated.

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### **11. Toxicological information**

**Acute toxicity:**

Carbon fibres and dust released during mechanical processing may cause irritation of eyes and skin. The symptoms will disappear after end of contact.

Inhalation of carbon fibres and carbon fibre dust may cause cough, irritation of nose and throat and sneezing.

Massive exposition may cause breathing difficulties, stasis of secretions and chest tightness

**Chronic toxicity:**

When used and handled according to specifications, the product does not have any harmful effects.

**Other information:**

In our experience and according to the literature provided to us the product does not cause any noxious effects when used and handled according to regulations.

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### **12. Ecological information**

No relevant information available.

Due to the consistency of the product a disperse distribution in the environment is not likely. Therefore, according to the present state of knowledge negative ecological effects are not expected.

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### **13. Disposal considerations**

**Waste treatment methods:**

Product residues can be recycled or treated in an energy recovery plant.  
When segregated, unpolluted product residues can be recycled mechanically.

**European waste catalogue:**

The unpolluted product has no dangerous properties and is therefore not a hazardous waste within the meaning of regulation on the European List of wastes.

**Waste codes/waste identification:**

The exact assignment to a waste code must be carried out source- and use-related.  
Proposals for the waste code numbers based on the probable use of the unpolluted product:  
07 02 13 (waste plastic)  
12 01 05 (plastics shavings and turnings)  
20 01 39 (plastics from separately collected fractions)

**Packaging:**

Uncontaminated or cleaned packaging can be recycled without verification.

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### **14. Transport information**

Not classified as dangerous in the meaning of transport regulations.

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### **15. Regulatory information**

**Safety, health and environmental regulations/legislation specific:**

According to annex II of the REACH regulation there is no legal obligation to compile safety data sheets for articles. We explicitly would like to point out that the present product handling information sheet (PHIS) is a voluntary information sheet for the handling of products, based on the same principle as our safety data sheets.  
Information pursuant to Article 33 of Regulation (EC) No 1907/2006 (REACH): That article doesn't contain any substance meeting the criteria in Article 57 and identified in accordance with Article 59(1) in a concentration above 0,1 % weight by weight (w/w).

**EU regulations:**

According to regulation (EC) No 1272/2008 (CLP) articles are not subject to classification and labelling requirements.

**Chemical safety assessment:**

A chemical safety assessment is not necessary for articles and therefore has not been carried out.

**National regulations:**

Storage class VCI/TRGS 510 (Germany): 11 (flammable solid materials)

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### **16. Other information**

**Indication of changes:**

First issue, status as of 05/22.

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Our information and statements reflect the current state of our knowledge and shall inform about our products and their applications. They do not assure or guarantee chemical resistance, quality of products and their merchantability in a legally binding way. Our products are not defined for use in medical or dental implants. Existing commercial patents have to be observed. The corresponding values and information are no minimum or maximum values, but guideline values. They do not represent guaranteed properly values and therefore they must not be used for specification purposes. The customer is solely responsible for the quality and suitability of products for the application and has to test usage and processing prior to use. It is the user`s responsibility to ensure that existing legislation and regulation are followed.