



**SAFETY DATA SHEET**  
ACCORDING TO EC-REGULATIONS 91/155/EEC, 2006/1907/EC and 2006/121/EC

**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING**

**Identification of the substance or preparation:** VICTREX® 150FC and 450FC compounds, with combined Carbon Fibre, Graphite and PTFE content as indicated by the grade name

**Company Identification:** Victrex Plc, Victrex Technology Centre, Hillhouse International, Thornton-Cleveleys, Lancs, FY5 4QD, UK

**Telephone:** ++ 44 (0) 1253 897700

**Fax:** ++ 44 (0) 1253 897701

**Emergency Phone No.** ++ 44 (0) 1253 897754

**Use of Substance / Preparation:** The materials are generally used for injection moulding and extrusion operations. This material is not for human implantation.

**2. HAZARDS IDENTIFICATION**

**EC Classification** Preparation is not classified as hazardous in the sense of directive 1999/45/EC and 2006/121/EC.

Product will burn in fire. A potential health hazard of this composition is the inhalation of thermal decomposition products from PTFE. Contamination of tobacco products MUST be avoided. Contains carbon fibre and graphite. Dusts from this compound may be electrically conductive and can short circuit electrical equipment .

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

**3.1 Preparation consisting of:**  
Polyetheretherketone (CAS No. 31694-16-3), Synthetic Graphite (CAS 7782-42-5), Carbon fibres (CAS 7440-44-0), Polytetrafluoroethylene (CAS 9002-84-0).

HAZARDOUS INGREDIENT(S)	%W/W	CAS No.	EC No.	EC Classification
-	-	-	-	-

For full text of R phrases see section 16.

VICTREX® 150FC and 450FC compounds, with combined Carbon Fibre,  
Graphite and PTFE content as indicated by the grade name

#### 4. FIRST AID MEASURES



- 4.1 Inhalation** Remove patient from exposure. Keep patient at rest and give oxygen if breathing difficult. If symptoms develop, obtain medical attention.
- 4.2 Skin Contact** After contact with skin, wash immediately with plenty of soap and water.  
**In the event of contact with molten product:** Cool affected area quickly with water. Do not attempt to remove hardened product. Obtain medical attention.
- 4.3 Eye Contact** Irrigate with eyewash solution or clean water, holding the eyelids apart, for at least 15 minutes. If symptoms persist, obtain medical attention.
- 4.4 Ingestion** May cause headache, nausea and vomiting. If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.
- 4.5 Further Medical Treatment** Unlikely to be required but if necessary treat symptomatically.
- 4.6 Special resources necessary for first aid** No data.

#### 5. FIRE FIGHTING MEASURES

- 5.1 Extinguishing Media** As appropriate for surrounding fire. Extinguish with carbon dioxide, dry chemical, foam or waterspray.
- 5.2 Unsuitable Extinguishing Media** None known.
- 5.3 Fire Fighting Protective Equipment** Protective respirator with independent air supply. Full protection, if necessary.
- 5.4 Special exposure hazards arising from the substance or preparation itself, combustion product, resulting gases.** In case of fire the following can develop: When glowing and during combustion, CO/CO<sub>2</sub> is generated as well as the potential for the release of degradation products such as Hydrogen Fluoride, Tetrafluoroethylene, Hexafluoropropylene, Perfluoroisobutylene and Carbonyl Fluoride. Product will burn, but smoke emission is low. Dust is ignitable but will not sustain combustion. A high temperature source of ignition is required. Insensitive to sparks. The minimum spark energy required for ignition of a dust cloud is greater than 5000 mJ. It will not train fire, e.g. along beams etc.
- 5.5 Other** Dispose of contaminated extinction water according to official regulations.

#### 6. ACCIDENTAL RELEASE MEASURES

Refer to Section 13 and for personal protection refer to section 8

- 6.1 Personal Precautions** Avoid inhalation and contact with eyes or skin. Ensure sufficient supply of air. Avoid build up of dust. Remove possible cause of ignition – do not smoke. Take precautionary measures against static discharges.
- 6.2 Environmental Exposure Controls** Avoid release to the environment. Prevent surface and ground water infiltration, as well as ground penetration.
- 6.3 Methods for cleaning up** Collect mechanically and dispose of according to Section 13. Avoid build up of dust.

#### 7. HANDLING AND STORAGE

- 7.1 HANDLING** See Section: 6.1. General hygiene measures for the handling of chemicals are

## VICTREX® 150FC and 450FC compounds, with combined Carbon Fibre, Graphite and PTFE content as indicated by the grade name

applicable. This is particularly important due to the presence of PTFE. Observe directions on label and instructions for use. Avoid conditions where decomposition products may be formed. When using do not smoke. Eating, drinking, smoking, as well as food storage, is prohibited in work room. Avoid build up of dust. Local Exhaust Ventilation at the workplace or on the processing machines required.

Note: Danger of explosive dust

Contamination of tobacco products MUST be avoided. "Polymer Fume Fever" is particularly associated with the smoking of contaminated tobacco products. This condition is characterised by influenza-type symptoms occurring a few hours after exposure and lasting up to 48 hours.

PTFE begins to decompose very slowly above 260°C and increases rapidly above 360°C. Processing above these temperatures yields a range of high toxicity and corrosive products and therefore is not recommended without the use of LEV.

**Machine Cleaning (purging):** Purging with other polymers (e.g Polyethylene) at high temperatures can be hazardous. They may emit decomposition fumes which contain oxides of carbon and irritants. Auto ignition may also occur. Local exhaust ventilation is required. The relevant Safety Data Sheet for the purge material to be used should be consulted. Additional information on the properties, processing and application of VICTREX polymers is available at [www.victrex.com](http://www.victrex.com).

### 7.2 STORAGE

Requirements for storage rooms and containers:

Not to be stored in gangways or stair wells. Store products enclosed, in original packing.

Special storage conditions:

See Section: 10.2. Store in dry place.

**Storage Temperature:**

Ambient.

**Storage Life:**

Stable at ambient temperatures.

**Specific use:**

Industrial use only.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ensure adequate ventilation. This can be achieved by local exhaust ventilation or general ventilation. If this is insufficient to maintain the concentration under the WEL or TRGS 900 values, suitable breathing protection should be worn. Applies only if maximum permissible exposure values are listed here.

### OCCUPATIONAL EXPOSURE LIMITS

SUBSTANCE.	CAS No.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m³)	STEL (ppm)	STEL (mg/m³)	Note:
Dust. (general dust limit value)	-		10			Inhalable Dust.
			4			Respirable Dust.
Fibre dust inorganic			2 fibres/ml, 5 mg/m3			

WEL: Workplace Exposure Limit (UK HSE EH40)

## VICTREX® 150FC and 450FC compounds, with combined Carbon Fibre, Graphite and PTFE content as indicated by the grade name



### 8.1 Respirators

Wear suitable respiratory protective equipment if exposure to levels above the occupational exposure limit is likely.



### 8.2 Eye Protection

Eye protection with side protection (EN 166)



### 8.3 Gloves

Impervious Gloves. Plastic or synthetic rubber gloves.  
Additional information on hand protection – No tests have been performed.  
When dealing with heated material: Insulating gloves EN 407 (heat).

### 8.4 Other

Protective working garments (e.g. safety shoes EN 344, long sleeved protective working garments).

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Form</b>	Solid. (Granulate)
<b>Colour</b>	Black.
<b>Odour</b>	Odourless.
<b>pH (Value)</b>	Not known.
<b>Boiling Point (°C)</b>	Not known.
<b>Melting Point (°C)</b>	343
<b>Flash Point (°C)</b>	Not known.
<b>Auto Ignition Temperature (°C)</b>	595
<b>Explosive Properties</b>	May form explosible dust clouds in air.
<b>Oxidising Properties</b>	Not applicable.
<b>Vapour Pressure (Pascal)</b>	Not known.
<b>Density (g/ml)</b>	FC30~1.4
<b>Solubility (Water)</b>	Not applicable.
<b>Electrical properties</b>	Contains carbon fibre and graphite. Dusts from this compound may be electrically conductive.

## 10. STABILITY AND REACTIVITY

<b>10.1 Conditions to avoid</b>	See Section: 7. Stable when handled and stored correctly. Electrostatic charge. Open flame, ignition sources. Decomposes at temperatures above (°C): 450. PTFE begins to decompose very slowly above 260°C and increases rapidly above 360°C.
<b>10.2 Materials to avoid</b>	See Section: 7. Concentrated Sulphuric acid.
<b>10.3 Hazardous Decomposition Product(s)</b>	See Section: 5.4

## 11. TOXICOLOGICAL INFORMATION

The following information is based on a consideration of the properties of the main components of this mixture.

<b>11.1 Ingestion</b>	Predicted to be low toxicity under normal conditions of handling and use.
<b>11.2 Inhalation</b>	May cause irritation to the respiratory system.
<b>11.3 Skin Contact</b>	Repeated and/or prolonged skin contact may cause irritation. In the event of contact with molten product: Thermal Burns (molten polymer will adhere to skin and cause severe burns).

## VICTREX® 150FC and 450FC compounds, with combined Carbon Fibre, Graphite and PTFE content as indicated by the grade name

11.4 Eye Contact	May cause eye irritation. Permanent damage is unlikely.
11.5 Long Term Exposure	Chronic effects are unlikely.

### 12. ECOLOGICAL INFORMATION

12.1 Environmental Fate and Distribution	Insoluble in water. The product has low mobility in soil.
12.2 Persistence and Degradation	The product is not biodegradable.
12.3 Toxicity	Low toxicity to aquatic organisms.
12.4 Effect on Effluent Treatment	Unlikely to affect biological treatment processes.
12.5 Water hazard class:	Not classified.

### 13. DISPOSAL CONSIDERATIONS

13.1 Regulatory information	Do not allow to enter drains, sewers or watercourses. Disposal should be in accordance with local, state or national legislation.
13.2 E.C disposal code no:	The waste codes are recommendations based on the scheduled use of this product. For alternative uses and applications, other waste codes may be allocated under certain circumstances.  07 02 13- waste plastic. 07 02 99- waste not otherwise specified.
13.3 Recommended:	Containers must be decontaminated in accordance with all applicable regulations.

### 14. TRANSPORT INFORMATION

#### International Transport Regulations

Not Classified as Dangerous for Transport.

UN No.:	Not applicable.
Road/Rail Transportation (ADR/RID):	Not applicable.
Class/Packing Group:	Not applicable.
Classification code:	Not applicable.
LQ:	Not applicable.
EmS:	Not applicable.

### 15. REGULATORY INFORMATION

Classification according to Dangerous Product Regulations incl. EC Directives 67/548/EEC, 1999/45/EC and 2006/121/EC.

EC Classification	Not classified as dangerous for supply/use.
Hazard Symbol	Not applicable.
Risk Phrases	Not applicable.
Safety Phrases	Not applicable.
Observe restrictions	VOC 1999/13/EC

#### INTERNATIONAL INVENTORIES

EINECS (Europe)	EINECS: Included.
-----------------	-------------------

# VICTREX® 150FC and 450FC compounds, with combined Carbon Fibre, Graphite and PTFE content as indicated by the grade name

## 16. OTHER INFORMATION

Manufactured in the UK under a Quality System approved to ISO 9001:2000 by Victrex Plc.

This Safety Data Sheet was prepared in accordance with Directive 2001/58/EC.

The following sections contain revisions or new statements: 1 - 16

Additional information on the properties, processing and application of VICTREX polymers is available at [www.victrex.com](http://www.victrex.com).

These details refer to the product as it is delivered.

The statements made here should describe the product with regard to the necessary safety precautions – they are not meant to guarantee definite characteristics – but they are based on our present up-to-date knowledge.

### World Headquarters

Victrex plc  
Hillhouse International  
Thornton Cleveleys  
Lancashire FY5 4QD  
United Kingdom  
Tel: + (44) 1253 897700  
Fax: + (44) 1253 897701  
Email: [victrexplc@victrex.com](mailto:victrexplc@victrex.com)

### Americas

Victrex USA Inc  
300 Conshohocken State Road  
Suite 120  
West Conshohocken, PA 19428  
USA  
Tel: + (1) 800-VICTREX  
Tel: + (1) 484-342-6001  
Fax: + (1) 484-342-6002  
Email: [americas@victrex.com](mailto:americas@victrex.com)

### Europe

Victrex Europa GmbH  
Hauptstr. 11  
65719 Hofheim/Ts.  
Germany  
Tel: + (49) 6192 96490  
Fax: + (49) 6192 964948  
Email: [eurosales@victrex.com](mailto:eurosales@victrex.com)

### Asia Pacific

Victrex Japan Inc  
Hanai Building 6F  
1-2-9 Shiba-Kouen  
Minato-ku  
Tokyo 105-0011  
Japan  
Tel: + (81) 35777 8737  
Fax: + (81) 35777 8738  
Email: [japansales@victrex.com](mailto:japansales@victrex.com)

### Asia Pacific

Victrex High Performance  
Materials (Shanghai) Co Ltd  
Part B Building G  
1688 Zhuanxing Road  
Xinzhuang Industry Park  
Shanghai 201108  
China  
Tel: + (86) 21-6113 6900  
Fax: + (86) 21-6113 6901  
Email: [scsales@victrex.com](mailto:scsales@victrex.com)

©Victrex

VICTREX PLC BELIEVES THAT THE INFORMATION CONTAINED IN THIS BROCHURE IS AN ACCURATE DESCRIPTION OF THE TYPICAL CHARACTERISTICS AND/OR USES OF THE PRODUCT OR PRODUCTS, BUT IT IS THE CUSTOMER'S RESPONSIBILITY TO THOROUGHLY TEST THE PRODUCT IN EACH SPECIFIC APPLICATION TO DETERMINE ITS PERFORMANCE, EFFICACY AND SAFETY FOR EACH END-USE PRODUCT, DEVICE OR OTHER APPLICATION. SUGGESTIONS OF USES SHOULD NOT BE TAKEN AS INDUCEMENTS TO INFRINGE ANY PARTICULAR PATENT. THE INFORMATION AND DATA CONTAINED HEREIN ARE BASED ON INFORMATION WE BELIEVE RELIABLE. MENTION OF A PRODUCT IN THIS DOCUMENTATION IS NOT A GUARANTEE OF AVAILABILITY. VICTREX PLC RESERVES THE RIGHT TO MODIFY PRODUCTS, SPECIFICATIONS AND/OR PACKAGING AS PART OF A CONTINUOUS PROGRAM OF PRODUCT DEVELOPMENT. VICTREX® IS A REGISTERED TRADEMARK OF VICTREX MANUFACTURING LIMITED. PEEK™, PEEK-HT™, T-SERIES™, MAX-SERIES™ AND APTIV™ ARE TRADEMARKS OF VICTREX PLC. VICOTE® IS A REGISTERED TRADEMARK OF VICTREX PLC.

VICTREX PLC MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, A WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR OF INTELLECTUAL PROPERTY NON-INFRINGEMENT, INCLUDING, BUT NOT LIMITED TO PATENT NON-INFRINGEMENT, WHICH ARE EXPRESSLY DISCLAIMED, WHETHER EXPRESS OR IMPLIED, IN FACT OR BY LAW. FURTHER, VICTREX PLC MAKES NO WARRANTY TO YOUR CUSTOMERS OR AGENTS, AND HAS NOT AUTHORIZED ANYONE TO MAKE ANY REPRESENTATION OR WARRANTY OTHER THAN AS PROVIDED ABOVE. VICTREX PLC SHALL IN NO EVENT BE LIABLE FOR ANY GENERAL, INDIRECT, SPECIAL, CONSEQUENTIAL, PUNITIVE, INCIDENTAL OR SIMILAR DAMAGES, INCLUDING WITHOUT LIMITATION, DAMAGES FOR HARM TO BUSINESS, LOST PROFITS OR LOST SAVINGS, EVEN IF VICTREX HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, REGARDLESS OF THE FORM OF ACTION.