SAFETY DATA SHEET

ACCORDING TO EC-REGULATIONS 1907/2006 (REACH) & 1272/2008 (CLP)

SECTION 1: IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1 Product identifier

Trade name	VICTREX™ PEEK 450FE20

1.2 Other means of identification

CAS No.	PEEK Polymer (31694-16-3 or 29658-26-2) PTFE Polymer (9002-84-0)
EC No.	Not applicable.
REACH Registration No.	Not applicable.

1.3 Recommended use of the substance and restrictions on use

Identified use(s)	The materials are generally used for injection moulding and extrusion operations.

1.4 Details of the supplier of the safety data sheet

1.4.1 Manufacturer Details

Company Identification	Victrex Manufacturing Ltd. Hillhouse International, Thornton-Cleveleys Lancashire, UK - FY5 4QD
Telephone	+ 44 (0) 1253 897700
Fax:	+ 44 (0) 1253 897701
E-Mail (competent person)	RAPS@victrex.com

1.4.2 Only Representative details

Company Identification	Stewardship Chemicals 40, Dlugosza 67, 43-188 Orzesze, Poland
Telephone:	+48 501168430
E-Mail (competent person)	pawelskiba@stewardshipsolutions.eu

1.4.3 Regional Importer Address — See section 16 for regional importer / supplier information

1.5 Emergency telephone number

Emergency Phone No.	+ 44 (0) 1253 897754 – UK (24/7) Hours of operation 09:00 – 17:00 (Monday – Friday): +(49) 6192 964 900 - Europe +(1) 484 342 6001 – USA + 86-21-6113 6900 - China

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

2.1.1	**Regulation (EC) No. 1272/2008 (CLP).**	Not classified as dangerous for supply/use.
2.2	**Label elements (GHS)**	None.
	Hazard pictogram(s)	None.
	Signal word(s)	None.
	Hazard statement(s)	None.
	Precautionary statement(s)	None.
2.3	**Other hazards**	Not classified as PBT or vPvB. PEEK polymer does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher Not explosive See section 9.2 below.
2.4	**Additional Information**	None.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Based on Polyetheretherketone polymer (CAS No. 29658-26-2 or 31694-16-3) and Polytetrafluoroethylene (PTFE) (CAS No: 9002-84-0)
This product does not contain any reportable hazardous materials

Classification according to Regulation EC No. 1272/2008 [CLP]:

Hazardous ingredient(s)	%W/W	EC No.	CAS No.	REACH Registration No.	Hazard statement(s)
None.	-	-	-	-	-

3.2 Additional Information

For full text of H/P phrases see section 16.

This product is 100% synthetic polymer microparticles* as defined in Entry 78 of Annex XVII to Regulation (EC) No 1907/2006
*80% polyetheretherketone (PEEK) polymer (CAS No. 29658-26-2 or 31694-16-3), 20% Polytetrafluoroethylene (PTFE) (CAS No: 9002-84-0)

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing.
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.
Eye Contact	Flush eyes with water for at least 2 minutes while holding eyelids open.
Ingestion	Call a physician (or poison control centre immediately).Do not induce vomiting wash out mouth with water.

4.2 Most important symptoms and effects, both acute and delayed — Unlikely to be required but if necessary treat symptomatically.

4.3 Indication of any immediate medical attention and special treatment needed — Unlikely to be required but if necessary treat symptomatically.

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable Extinguishing Media	In case of fire, use water spray, foam, dry powder or CO2 for extinction.
Unsuitable Extinguishing Media	None.

5.2 Special hazards arising from the substance or mixture

In case of fire the following can develop: Oxides of carbon. When glowing and during combustion, CO/CO2 is generated as well as the potential for the release of degradation products such as Hydrogen Fluoride, Tetrafluoroethylene, Hexafluropropylene, Perfluoroisobutylene and Carbonyl Fluoride.

5.3 Advice for fire-fighters

A self contained breathing apparatus and suitable protective clothing should be worn in fire conditions.
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.

5.4 Other — Dispose of contaminated extinction water according to official regulations.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures — 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 discharge.

6.2	**Environmental precautions**	Avoid release to the environment. Prevent surface and ground water infiltration, as well as ground penetration. This product contains synthetic polymer microparticles as amended by Regulation (EU) 2023/2055. The synthetic polymer microparticles supplied is subject to conditions laid down by entry 78 of Annex XVII to Regulation (EC) No 1907/2006 of the European Parliament and of the Council.
6.3	**Methods and material for containment and cleaning up**	Sweep up carefully with non-sparking tools. Transfer to a lidded container for disposal or recovery.
6.4	**Reference to other sections**	None.
6.5	**Additional Information**	None.

SECTION 7: HANDLING AND STORAGE

7.1	**Precautions for safe handling**	General hygiene measures for the handling of chemicals are applicable. 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. 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 can be obtained from the Victrex website www.victrex.com www.victrex.com
7.2	**Conditions for safe storage, including any incompatibilities**	Store products enclosed, in original packing.
	Storage Temperature	Store at room temperature.
	Storage Life	10 Year(s).
	Incompatible materials	None known
7.3	**Specific end use(s)**	The materials are generally used for injection moulding and extrusion operations.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters Ensure adequate ventilation.

8.1.1 Occupational exposure limits None.

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.

8.1.2 Biological limit value None

8.1.3 PNECs and DNELs Not available.

8.2 Exposure controls

8.2.1 Appropriate engineering controls Local Exhaust Ventilation at the workplace or on the processing machines required.

8.2.2 Personal protection equipment

Eye/face protection

Eye protection with side protection (EN 166)

Skin protection (Hand protection/ Other)

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)

Respiratory protection

If above exposure limits are likely to be exceeded, breathing mask with fine dust filter (EN 143)

8.2.3 Environmental Exposure Controls No special requirements.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Solid (Granulate)
Colour.	Grey/ Brown
Odour	Odourless
Odour threshold (ppm)	None
pH (Value)	Not applicable
Melting point (°C)	343°C
Boiling point/boiling range (°C):	Not known.
Flash point (°C)	Not known.
Evaporation rate	Not known.
Flammability (solid, gas)	Solid , Non-flammable
Explosive limit ranges	Not explosive.
Vapour pressure (Pascal)	39.6 (@107°C)

Vapour density (Air=1)	Not known
Bulk Density (g/ml)	~1.4
Solubility (Water)	Insoluble
Solubility (Other)	Insoluble
Partition coefficient (n-Octanol/water)	Not known
Auto ignition point (°C)	595°C
Decomposition temperature (°C)	> 450°C
Viscosity (mPa. s)	Not known
Kinematic viscosity (mm^2/s)	Not applicable
Particle characteristics	Granule (pellets) dimensions: Length 2.0 – 4.0mm; diameter 2.0 – 3.5mm

No 'Nanoparticles' or 'Nanomaterial' substances (per the definition in EU Commission Recommendation 2022/3689/EU) have been generated in the manufacturing process, nor intentionally added to the Victrex grades detailed above.

9.2 Other information

9.2.1 Information with regard to physical hazard classes

Explosives	Not explosive

SECTION 10: STABILITY AND REACTIVITY

10.1	**Reactivity**	Stable under normal conditions.
10.2	**Chemical stability**	Stable under normal conditions.
10.3	**Possibility of hazardous reactions**	Stable under normal conditions.
10.4	**Conditions to avoid**	Stable under normal conditions. Electrostatic charge. Open flame, ignition sources. Decomposes at temperatures above 450°C.
10.5	**Incompatible materials**	Concentrated Sulphuric acid
10.6	**Hazardous Decomposition Product(s)**	When glowing and during combustion, CO/CO2 is generated as well as the potential for the release of degradation products such as Hydrogen Fluoride, Tetrafluoroethylene, Hexafluropropylene, Perfluoroisobutylene and Carbonyl Fluoride.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

11.1.1 Substances

Acute toxicity

Ingestion	Predicted to be low toxicity under normal conditions of handling and use.
Inhalation	Mechanical irritation of the respiratory tract.
Skin Contact	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).
Eye Contact	No data. Dust may have irritant effect on eyes.

		Permanent damage is unlikely.
	Hazard label(s)	Not known
	Serious eye damage/irritation	Not known
	respiratory or skin sensitization	Not known
	Mutagenicity	Not known
	Carcinogenicity	Not known
	Reproductive toxicity	Not known
	STOT - single exposure	Not known
	STOT - repeated exposure	Not known
	Aspiration hazard	Not known
11.1.2	**Mixtures**	Not applicable
11.2	**Information on other hazards**	None
11.2.1	**Endocrine disrupting properties**	PEEK polymer does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher
11.2.2	**Other information**	None

SECTION 12: ECOLOGICAL INFORMATION

12.1	**Toxicity**	Low toxicity to aquatic organisms.
12.2	**Persistence and degradability**	Not readily biodegradable.
12.3	**Bioaccumulative potential**	Not classified as PBT or vPvB.
12.4	**Mobility in soil**	The product has low mobility in soil. The product has low mobility in sediment.
12.5	**Results of PBT and vPvB assessment**	Not classified as PBT or vPvB.
12.6	**Endocrine disrupting properties**	PEEK polymer does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher
12.7	**Other adverse effects**	None anticipated

SECTION 13: DISPOSAL CONSIDERATIONS

13.1	**Waste treatment methods**	Disposal should be in accordance with local, regional, state or national legislation.
13.2	**Additional Information**	The European 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.

This product contains synthetic polymer microparticles as amended by Regulation (EU) 2023/2055.
The synthetic polymer microparticles supplied is subject to conditions laid down by entry 78 of Annex XVII to Regulation (EC) No 1907/2006 of the European Parliament and of the Council.
Measures should be taken to prevent releases of synthetic polymer microparticles to the environment.
Sweep up spillages immediately and transfer to a container for disposal. Do not release waste to sewers.

SECTION 14: TRANSPORT INFORMATION

14.1	**Land transport (ADR/RID)**	Not classified as dangerous for transport.
	UN number	Not applicable
	Proper Shipping Name	Not applicable
14.2	**Sea transport (IMDG)**	Not classified as dangerous for transport.
	UN number	Not applicable
	Proper Shipping Name	Not applicable
14.3	**Air transport (ICAO/IATA)**	Not classified as dangerous for transport.
	UN number	Not applicable
	Proper Shipping Name	Not applicable
14.4	**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable

SECTION 15: REGULATORY INFORMATION

15.1	**Safety, health and environmental regulations/legislation specific for the substance or mixture**	Not classified as dangerous for supply/use.
15.1.1	**EU regulations**	
	Authorisations and/or restrictions on use	This product contains synthetic polymer microparticles as amended by Regulation (EU) 2023/2055. The synthetic polymer microparticles supplied is subject to conditions laid down by entry 78 of Annex XVII to Regulation (EC) No 1907/2006 of the European Parliament and of the Council.
15.1.2	**National regulations**	
	USA	
	TSCA – PEEK Polymer	Listed – ACTIVE
	TSCA – PTFE polymer	Listed - ACTIVE
	OSHA	Not classified as a hazardous material under the criteria outlined in the OSHA Hazard Communication Standard (HCS) (29 CFR 1910.1200).
	China	
	IECSC – PEEK Polymer	Listed
	IECSC – PTFE polymer	Listed

	China Hazardous Chemical Inventory 2015	Not Listed
15.2	**Chemical Safety Assessment**	Not relevant for this material.

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: Updated in line with Regulation (EU) 2020/878 and (EU) 2023/2055.

LEGEND

LTEL	Long Term Exposure Limit
STEL	Short Term Exposure Limit
STOT	Specific Target Organ Toxicity
DNEL	Derived No Effect Level
PNEL	Predicted No Effect Concentration

References: Workplace Exposure Limit (UK HSE EH40)
Risk Phrases and Safety Phrases: None
Hazard statement(s) and Precautionary statement(s): None
Training advice: www.victrex.com

Additional Information

Manufactured in the UK by Victrex Manufacturing Ltd, under a Quality System approved to ISO 9001.
For the latest copy of this MSDS please check our website here Material Safety Data Sheets (MSDS) - Victrex
Additional information on the properties, processing and application of VICTREX polymers is available at 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.

Regional Importer Addresses

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West Conshohocken
PA, 19428 USA
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SDS Date of Preparation: 24-September-2025 **updated from SDS Revision:** 06-November-2023

Victrex Global Sites

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