

VICTREX® PEEK 151G

Polyetheretherketone

Victrex plc



ides.com/prospector

Technical Data

Product Description

High performance thermoplastic material, unreinforced PolyEtherEtherKetone (PEEK), semi crystalline, depth filtered granules for injection moulding, easy flow, FDA food contact compliant, colour natural/beige.

Complex geometries with thin cross sections or long flow lengths, for high strength and stiffness as well as good ductility. Chemically resistant to aggressive environments, suitable for sterilization for medical and food contact applications.

General

Material Status	<ul style="list-style-type: none">Commercial: Active
Literature ¹	<ul style="list-style-type: none">Technical Datasheet (English)Processing - Victrex PEEK Extrusion Guide (English)Processing - Victrex PEEK Finishing Operations (English)Processing - Victrex PEEK Injection Molding Guide (English)Processing - Victrex PEEK Compression Molding Guide (English)
UL Yellow Card ²	<ul style="list-style-type: none">E161131-224301
Search for UL Yellow Card	<ul style="list-style-type: none">Victrex plcVICTREX® PEEK
Availability	<ul style="list-style-type: none">Asia PacificEuropeNorth America
Features	<ul style="list-style-type: none">DuctileFood Contact AcceptableGood Chemical ResistanceGood FlowGood SterilizabilityHigh StiffnessHigh StrengthSemi Crystalline
Uses	<ul style="list-style-type: none">Medical/Healthcare ApplicationsNon-specific Food Applications
Agency Ratings	<ul style="list-style-type: none">FDA Food Contact, Unspecified Rating
Appearance	<ul style="list-style-type: none">BeigeNatural Color
Forms	<ul style="list-style-type: none">Granules
Processing Method	<ul style="list-style-type: none">Injection Molding

Physical	Nominal Value Unit	Test Method
Density		ISO 1183
-- ⁴	1.26 g/cm ³	
-- ⁵	1.30 g/cm ³	
Molding Shrinkage ⁶		ISO 294-4
Across Flow: 160°C	1.3 %	
Flow: 160°C	1.0 %	
Water Absorption		ISO 62
23°C, 24 hr, 3.20 mm	0.070 %	
Equilibrium, 23°C, 50% RH	0.40 %	
Spiral Flow		Internal Method
160°C, 1.00 mm ⁶	220 mm	
180°C, 1.00 mm ⁷	250 mm	
200°C, 1.00 mm ⁸	300 mm	

Mechanical	Nominal Value Unit	Test Method
Tensile Modulus (23°C)	3700 MPa	ISO 527-2
Tensile Stress (Yield, 23°C)	110 MPa	ISO 527-2
Tensile Strain (Break, 23°C)	25 %	ISO 527-2
Flexural Modulus (23°C)	4300 MPa	ISO 178
Flexural Strength		ISO 178
3.5% Strain, 23°C	130 MPa	
23°C	175 MPa	
125°C	90.0 MPa	
175°C	19.0 MPa	
275°C	13.0 MPa	

VICTREX® PEEK 151G

Polyetheretherketone

Victrex plc



ides.com/prospector

	Nominal Value Unit	Test Method
Mechanical		
Compressive Stress		ISO 604
23°C	130 MPa	
120°C	80.0 MPa	
Impact		
Charpy Notched Impact Strength (23°C)	4.0 kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	No Break	ISO 179
Notched Izod Impact Strength (23°C)	5.0 kJ/m ²	ISO 180/A
Unnotched Izod Impact Strength (23°C)	No Break	ISO 180
Hardness		
Shore Hardness (Shore D, 23°C)	85	ISO 868
Thermal		
Heat Deflection Temperature		ISO 75-2/Af
1.8 MPa, Unannealed	156 °C	
Glass Transition Temperature	143 °C	ISO 11357-2
Melting Temperature	343 °C	ISO 11357-3
CLTE		ISO 11359-2
Flow: < 143°C	0.000050 cm/cm/°C	
Flow: > 143°C	0.00012 cm/cm/°C	
Transverse: < 143°C	0.000055 cm/cm/°C	
Transverse: > 143°C	0.00014 cm/cm/°C	
Specific Heat (23°C)	2200 J/kg/°C	DSC
Thermal Conductivity (23°C)	0.29 W/m/K	Internal Method
RTI Elec	260 °C	UL 746
RTI Imp	180 °C	UL 746
RTI Str	240 °C	UL 746
Electrical		
Volume Resistivity		IEC 60093
23°C	1.0E+16 ohm·cm	
125°C	1.0E+15 ohm·cm	
275°C	1.0E+9 ohm·cm	
Electric Strength (2.00 mm)	23 kV/mm	IEC 60243-1
Dielectric Constant (23°C, 1 kHz)	3.10	IEC 60250
Dissipation Factor (23°C, 1 MHz)	0.0040	IEC 60250
Comparative Tracking Index	150 V	IEC 60112
Flammability		
Glow Wire Flammability Index (2.00 mm)	960 °C	IEC 60695-2-12
Oxygen Index		ISO 4589-2
-- 9	24 %	
-- 10	35 %	
Toxicity		NES 713
CO Content	0.0740	
CO2 Content	0.150	
Total Gases	0.220	
Fill Analysis		
Melt Viscosity (400°C)	130 Pa·s	ISO 11443
Injection		
Drying Temperature	120 to 150 °C	
Drying Time	3.0 to 5.0 hr	
Hopper Temperature	< 100 °C	
Rear Temperature	350 °C	
Middle Temperature	355 °C	
Front Temperature	360 °C	

VICTREX® PEEK 151G

Polyetheretherketone

Victrex plc

Injection	Nominal Value Unit
Nozzle Temperature	365 °C
Mold Temperature	170 to 200 °C

Injection Notes

Runner: Die / nozzle >3mm, manifold >3.5mm
Gate: >1mm or 0.5 x part thickness

Notes

¹ These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.

² A UL Yellow Card contains UL-verified flammability and electrical characteristics. UL IDES continually works to link Yellow Cards to individual plastic materials in Prospector, however this list may not include all of the appropriate links. It is important that you verify the association between these Yellow Cards and the plastic material found in Prospector. For a complete listing of Yellow Cards, visit the UL Yellow Card Search.

³ Typical properties: these are not to be construed as specifications.

⁴ Amorphous

⁵ Crystalline

⁶ 365°C nozzle

⁷ 375°C nozzle

⁸ 400°C nozzle

⁹ 0.4 mm

¹⁰ 3.2 mm

VICTREX® PEEK 151G

Polyetheretherketone

Victrex plc

 **IDES** | Prospector

ides.com/prospector

Where to Buy

Supplier

Victrex plc

Lancashire, United Kingdom

Telephone: +44 1253 897700

Web: <http://www.victrex.com/>

Distributor

Biesterfeld Plastic GmbH

Biesterfeld Plastic GmbH is a Pan European distribution company. Contact Biesterfeld Plastic GmbH for availability of individual products by country.

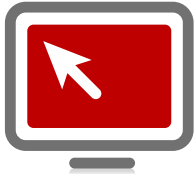
Telephone: +49-40-32008-0

Web: <http://www.biesterfeld-plastic.com/>

Availability: Austria, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Greece, Hungary, Romania, Serbia, Slovakia, Slovenia



Founded in 1986 and based in Laramie, Wyoming, IDES is now part of the UL family of companies. UL is a premier global independent safety science company with more than a century of proven history. Employing nearly 10,000 professionals in over 100 countries, UL has five distinct business units -- Product Safety, Environment, Life & Health, Knowledge Services and Verification Services -- to meet the expanding needs of our customers and to deliver on our public safety mission.



Prospector Plastics Database - www.ides.com/prospector

Prospector is a searchable online database that includes 85,000 data sheets from 875 manufacturers and 44,000 UL yellow cards. Each data sheet includes property, processing and supplier contact information. Prospector is relied on by nearly 400,000 design engineers and plastics processors. Using Prospector, they save time with plastic material selection by quickly and easily referencing technical information critical to the success of their products.

"Prospector is absolutely the best and most well-known search engine for plastic raw materials in the world. We use Prospector every day – it's a real time saver!"

– Birgit Elvardt Bader, Production Manager, Micotron

Power Searches

Property Search – select plastics by 500 key properties and design parameters.

Alternative Resins Search – find replacement plastics within minutes.

Automotive Plastics Search – easily locate automotive approved plastics.

Curve Data – view, overlay and export curve data.



Material Data Management – www.ides.com/datasheets

With our data management services, plastic suppliers and distributors can have custom search interfaces available on their website for their customers, website visitors, sales and customer service teams. These provide intuitive ways to find and view technical data sheets for their products.

"With UL IDES data services, our website now displays the most current information on the products we distribute and links to our backend RFQ and sales order system, adding both value and service for our customers."

– Kevin Chase, Owner & President, Chase Plastics



Advertising – www.ides.com/advertise

Reach 365,000 pre-qualified plastics professionals and generate leads with proven techniques. Electronic newsletter insertions, sponsored webinars and powerful online ads are available to make the most of your lead-generation program.



For more information, call: 800.788.4668 or 307.742.9227 ext. 220