

Geolast™ 701-87W183

Thermoplastic Vulcanizate

Product Description

A hard, black, oil resistant thermoplastic vulcanizate (TPV) in the thermoplastic elastomer (TPE) family. This material combines good hot air and hot oil resistance for use in a wide range of applications. This grade of Geolast TPV is shear-dependent and can be processed on conventional thermoplastics equipment for injection molding, extrusion or blow molding. It is polyolefin based and recyclable within the manufacturing stream.

Key Features

- Recyclable.
- Designed for improved fluid resistance.

General

Availability ¹	▪ Latin America	▪ North America
Applications	▪ Automotive - Seals and Gaskets	▪ Oil Resistant Seals and Gaskets
Uses	▪ Automotive Applications	▪ Industrial Applications
RoHS Compliance	▪ RoHS Compliant	
Color	▪ Black	
Form(s)	▪ Pellets	
Processing Method	▪ Blow Molding ▪ Coextrusion ▪ Extrusion	▪ Extrusion Blow Molding ▪ Injection Blow Molding ▪ Injection Molding ▪ Multi Injection Molding ▪ Profile Extrusion ▪ Sheet Extrusion
Revision Date	▪ 06/17/2014	

Physical	Typical Value (English)	Typical Value (SI)	Test Based On
Density / Specific Gravity	1.02	1.02	ASTM D792
Density	1.02 g/cm ³	1.02 g/cm ³	ISO 1183

Hardness	Typical Value (English)	Typical Value (SI)	Test Based On
Shore Hardness			ISO 868
Shore A, 15 sec, 73°F (23°C)	87	87	

Elastomers	Typical Value (English)	Typical Value (SI)	Test Based On
Tensile Stress at 100% - Across Flow (73°F (23°C))	711 psi	4.90 MPa	ASTM D412
Tensile Stress at 100% - Across Flow (73°F (23°C))	711 psi	4.90 MPa	ISO 37
Tensile Strength at Break - Across Flow (73°F (23°C))	1220 psi	8.40 MPa	ASTM D412
Tensile Stress at Break - Across Flow (73°F (23°C))	1220 psi	8.40 MPa	ISO 37
Elongation at Break - Across Flow (73°F (23°C))	280 %	280 %	ASTM D412
Tensile Strain at Break - Across Flow (73°F (23°C))	280 %	280 %	ISO 37
Compression Set			ASTM D395B
158°F (70°C), 22 hr, Type 1	38 %	38 %	
257°F (125°C), 70 hr, Type 1	55 %	55 %	
Compression Set			ISO 815
158°F (70°C), 22 hr, Type A	38 %	38 %	
257°F (125°C), 70 hr, Type A	55 %	55 %	

Thermal	Typical Value (English)	Typical Value (SI)	Test Based On
Brittleness Temperature	-27 °F	-33 °C	ASTM D746
Brittleness Temperature	-27 °F	-33 °C	ISO 812

Injection Notes

Geolast TPV is incompatible with acetal and PVC. For more information regarding processing and mold design, please consult our Injection Molding Guide.

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Extrusion Notes

Geolast TPV is incompatible with acetal and PVC. For more information regarding processing and die design, please consult our Extrusion Guide.

Aging	Typical Value (English)	Typical Value (SI)	Test Based On
Change in Tensile Strength in Air 257°F (125°C), 168 hr	2.0 %	2.0 %	ASTM D573
Change in Tensile Strength in Air 257°F (125°C), 168 hr	2.0 %	2.0 %	ISO 188
Change in Ultimate Elongation in Air 257°F (125°C), 168 hr	-18 %	-18 %	ASTM D573
Change in Tensile Strain at Break in Air 257°F (125°C), 168 hr	-18 %	-18 %	ISO 188
Change in Durometer Hardness in Air Shore A, 257°F (125°C), 168 hr	2.0	2.0	ASTM D573
Change in Shore Hardness in Air Shore A, 257°F (125°C), 168 hr	2.0	2.0	ISO 188

Additional Information

Where applicable, test results based on fan gated, injection molded plaques.

Tensile strength, elongation and tensile stress are measured across the flow direction - ISO type 1, ASTM die C.

Compression set at 25% deflection.

This product may be manufactured by a third party under contract with Exxon Mobil Corporation or one of its affiliates, pursuant to a quality management system which complies with the requirements of ISO 9001:2015.

All products purchased directly from an ExxonMobil affiliate in Europe are REACH compliant. For products not imported into Europe by ExxonMobil, customers should assess their legal responsibilities under REACH.

Legal Statement

This product, including the product name, shall not be used or tested in any medical application without the prior written acknowledgement of ExxonMobil Chemical as to the intended use. For detailed Product Stewardship information, please contact Customer Service.

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Processing Statement

Desiccant drying for 3 hours at 80°C (180°F) is recommended. Geolast TPV has a wide temperature processing window from 175 to 230°C (350 to 450°F) and is incompatible with acetal and PVC. The melt temperature should be maintained below 215°C (420°F). For more information, please consult our Safety Data Sheet, Injection Molding Guide and Extrusion Guide.

Notes

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

¹ Product may not be available in one or more countries in the identified Availability regions. Please contact your Sales Representative for complete Country Availability.

For additional technical, sales and order assistance: www.exxonmobilchemical.com/ContactUs

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