

PRODUCT DESCRIPTION

A hard , black thermoplastic vulcanizate, TPV (EPDM/PP) in the thermoplastic elastomer family designed for use in medical applications

GENERAL PROPERTIES

Material Status	Active
Availability	Europe North America Asia- Pasific Africa & Middle East
Features	Ozone Resistance Adhesion to Polyolefins Recyclable Compliant with RoHS Directive 2011/65/EU Compliant with USP Class VI Requirements
Certification	RoHS
Appearance	Black
Form	Pellets
Processing Method	Injection, Extrusion

Physical Properties

Property	Typical Value (English)	Typical Value (SI)	Test Method
Density	0.91 g/cm ³	0,91 g/cm ³	ASTM D 792
Durometer Hardness, 3 sec (Shore D)	40.00	40,00	ASTM D 2240
Tensile Strength at Break	2176 Psi	15,00 MPa	ASTM D412, Method A
Mod.of Elasticity %100	1204 Psi	8,30 MPa	ASTM D412, Method A
Mod.of Elasticity %300	1363 Psi	9,40 MPa	ASTM D412, Method A
Elongation at break	600.00 %	600,00 %	ASTM D412, Method A
Compression Set (at 73 °F, 22 h)	39.00 %	39,00 %	ASTM D 395, Type 2, Method B
Compression Set (at 158 °F, 22 h)	56.00 %	56,00 %	ASTM D 395, Type 2, Method B
Compression Set (at 212 °F, 22 h)	71.00 %	71,00 %	ASTM D 395, Type 2, Method B
Tear Resistance	513.91 lbf/in	90,00 N/mm	ASTM D624

Shrinkage

Property	Typical Value (English)	Typical Value (SI)	Test Method
Flow	1.72%	1.72%	ASTM D955
Across Flow	1.38%	1.38%	ASTM D955

Ageing Tests

Additional Information	Typical Value (English)	Typical Value (SI)	Test Method
Ozone Resistance-Stressed	No cracks	No cracks	ASTM D 1149

Bondable to

PE-PP-EVA

Additional Information

Elastron products are not compatible with PVC and Acetal.
Regrinding level up to %20 is recommended with minimum property loss.

Processing

Injection Molding	Typical Value (English)		Typical Value (SI)	
Drying temperatures	194	°F	90	°C
Drying time	2	hours	2	hours
Rear Zone temp.	311-347	°F	155- 175	°C
Middle Zone temp.	329-365	°F	165- 185	°C
Front Zone temp.	338-374	°F	170- 190	°C
Nozzle Temperature	356-410	°F	180- 210	°C
Injection Speed	Moderate	-	Moderate	-
Injection Time	2- 4	sec.	2- 4	sec.
Injection Pressure	10- 40	bar	10- 40	bar
Hold Pressure	5- 20	bar	5- 20	bar
Back Pressure	5- 40	bar	5- 40	bar
Screw Speed	50- 200	rpm	50- 200	rpm
Mold Temperature	77-122	°F	25- 50	°C
Screw Comp. ratio	1.5:1- 2.0:1	-	1.5:1- 2.0:1	-
Screw L/D ratio	18- 24	-	18- 24	-
Residence time	1-2 shot	-	1-2 shot	-
Cushion size	0.3120	inc	8	mm
Suggested Max Regrind	20	%	20	%

Extrusion Molding	Typical Value (English)		Typical Value (SI)	
Drying temperatures	194	°F	90	°C
Drying time	2	hours	2	hours
Screw Comp. Ratio	1.5:1- 2.0:1	-	1.5:1- 2.0:1	-
Screw L/D	18- 30	-	18- 30	-
Feed Zone temp.	311-329	°F	155- 165	°C
Rear Zone temp.	320-356	°F	160- 180	°C
Center Zone temp.	329-365	°F	165- 185	°C
Front Zone temp.	338-374	°F	170- 190	°C
Head temp.	356-410	°F	180- 210	°C
Die temp.	365-419	°F	185- 215	°C
Suggested Max Regrind	20	%	20	%

Notes

The company name, the brand, the logo and all kinds of visuals and writings in this document are the property of Elastron. It cannot be copied, distributed, modified or reproduced without the express written permission of Elastron. Independently, these documents can only be printed for personal use. However, in any case, the visuals and writings contained here cannot be used in another document or web page.

All the visuals, texts, information and explanations and the like in this document are for promotional purposes, giving information and providing convenience to the user. The values presented in this document apply only to the product mentioned above and cannot be extended to other products in general. Elastron is not responsible for the results that may arise from tests outside the control of Elastron. Although Elastron bases the information and suggestions contained herein on reliable data, it does not guarantee that such information and suggestions are correct and that the product is suitable for its intended use.

The user should know that Elastron must obtain the final information before taking any action by referring to the information and suggestions contained in this document.

Elastron reserves the right, at its discretion, to change or terminate the content of the document at any time and in any way.

ISO 9001: 2015 & IATF16949: 2016 & ISO 14001: 2015 REGISTERED QUALITY SYSTEMS

