

Enflex V1050D

Enflex V1050D TPV (thermoplastic vulcanizate) is a general purpose rigid black EPDM/PP compound available in both natural and black. This grade is design for injection molding, extrusion and blow molding applications requiring **high rigidity with high heat resistance.**

Properties	Value	Unit	Standard
Physical			
Hardness - Injection Molded, 5 sec	51	Shore D	ASTM D2240
Hardness - Extruded, 5 sec	50	Shore D	ASTM D2240
Density	0.95	g/cm3	ASTM D792
Mechanical			
Tensile Strength at Break	3,626 (25.0)	psi (MPa)	ASTM D412
Elongation at Break	720	%	ASTM D412
100% Modulus	1,595 (11.8)	psi (MPa)	ASTM D412
Tear Strength	102	kN/m	ASTM D624, Die C
Compression Set			
22h / 70 °C	70	%	ASTM D395
70h / 125 °C	90	%	ASTM D395
Service Temperatures			
Brittleness Point	-30	°C	ASTM D746
Dynamic Service Temperature	130	°C	
Rheology			
Melt Temperature	159°C (317°F)	g/cm3	ASTM D1238

Features

Good heat resistance (up to 130C)
Rubberlike elasticity, low compression set
Ease of processing
Compatible with PP (overmolding, blending)
Recyclability

Environmental Resistance

Ozone – Excellent
UV – Excellent
Alcohol = Excellent
Oils and Solvents - Good
Detergent – Good
Weak Acids and Bases – Good to excellent

Processing Parameters

Drying Conditions

Enflex V grades require drying prior to processing as they are hygroscopic and absorb moisture. Material should be dried for 2-4 hours at 180°F (82°C). Moisture content below .08% prior to processing

Injection Molding Conditions

Temperatures:

Rear: 350 – 370°F (177 – 188°C)
Middle: 360 – 380°F (182 – 193°C)
Front: 370 – 390°F (188 – 199°C)
Nozzle: 390 – 430°F (199 – 221°C)
Melt Temperature: 390 – 450°F (199 – 230°C)
Mold Temperature: 50 – 120°F (10 – 50°C)

Injection Pressure: 750 – 1300psi

Injection Speed: Fast (0.5 – 2.0 seconds)

Screw Speed: 50 – 200 rpm

Hold Times: 5-7 seconds

Cushion: 0.2 - 0.5 inch

Cooling Times: 30 – 50 seconds

Clamp Tonnage: 3.0 to 5.0 tons/in²

Extrusion Conditions

Screw: L/D 20:1 or greater (L/D 24:1 preferred)

Temperatures:

Feed Throat: 320-350°F (160 – 180°C)
Feed Zone: 340 – 375°F (170 – 190°C)
Compression Zone: 355 – 390°F (180 – 200°C)
Metering Zone: 375 – 410°F (190 – 210°C)
Die/Adapter: 375 – 410°F (190 – 210°C)
Melt Temperature: 375 – 390°F (190 – 200°C)
Cooling Water: 60 – 85°F (15-30°C)

Screw Speed: 100 - 200 rpm

Screen Pack: 20/40/60

†The data listed here fall within the normal range of product properties, but they should not be used to establish specification limits or used alone as a basis for design. This information is not intended as a warranty of any kind. Buyers must make their own representative test and assume all risks of use, whether used alone or in combination with other products. Ravago Manufacturing Americas, LLC assumes no obligation or liability of any advice furnished by it or results obtained with respect to these products. All warranties expressed or implied including warranties of merchantability for a particular purpose or use are excluded and disclaimed. Ravago Manufacturing Americas, LLC assumes no liability for use of products in infringement of any patent. The foregoing limitation of remedy and exclusion of liability is reflected in and is part of the consideration for the price, at which the products are sold by Ravago Manufacturing Americas, LLC. All data displayed herein has been obtained via testing of injected molded specimens of natural color. Pigmentation may affect certain properties to various degrees.

*This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.

‡ Shrinkage data are general guidelines and are only intended to allow comparison to other materials. They should not be used as the sole source of information for generating core and cavity mold dimensions.