

## 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
<b>Physical</b>			
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
<b>Mechanical</b>			
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
<b>Compression Set</b>			
22h / 70 °C	70	%	ASTM D395
70h / 125 °C	90	%	ASTM D395
<b>Service Temperatures</b>			
Brittleness Point	-30	°C	ASTM D746
Dynamic Service Temperature	130	°C	
<b>Rheology</b>			
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/in<sup>2</sup>

### 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.

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