



1/4" x .035 304L welded coil tubing encapsulated in a 0.330" TPV jacket with sequential markings

Product Description:

50 Shore D TPV (Thermoplastic vulcanizate) available in black or natural. This weatherable grade is design for injection molding, extrusion and blow molding applications, requiring rigidity and high heat resistance.

Physical

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	159oC (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

17512 Highway 6, Suite F-6
 Manvel, TX. 77578
 PH # 832.336.5927



jason@luxwws.com
www.luxwws.com



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 180oF (82oC). Moisture content below .08% prior to processing

InjectionMolding Conditions

Temperatures:

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

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: 320-350oF (160 – 180oC)
Feed Zone: 340 – 375oF (170 – 190oC)
Compression Zone: 355 – 390oF (180 – 200oC)
Metering Zone: 375 – 410oF (190 – 210oC)
Die/Adapter: 375 – 410oF (190 – 210oC)
Melt Temperature: 375 – 390oF (190 – 200oC)
CoolingWater: 60 – 85oF (15-30oC)

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

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TPV

TPV (Thermoplastic Vulcanizate) is a stable elastomer by blending EPDM + dynamically vulcanized PP.

Material characteristics:

- (1) It is non-toxic and environmentally friendly, does not contain carcinogenic substances such as nitrite and heavy metals, and can be recycled to achieve sanitation standards to conform to SGS certification and EU ROHS norms.
- (2) Good aging resistance.
- (3) Small changes in hardness in varied temperatures: applicable temperature range is -30 °C ~ 120°C. At temperature range of -20 °C ~ 40°C, the Shore hardness is less than SA, which is better than that of traditional PVC and EPDM materials.

Thermoplastic Vulcanizate A soft (59 duro A) thermoplastic vulcanizate (TPV) in the thermoplastic elastomer (TPE) family.

NSF-61 certified designed for use in plumbing applications requiring potable water contact.