

## Material Specification

**PPI EPDM Rubber Compound**

## PPI 77400

Flexible rubber Railseal profiles manufactured by Performance Polymers Innovations Inc. are extruded using high quality materials that are specifically compounded for demanding applications in highway grade crossing and industrial environments. This rubber compound has excellent weathering, aging, abrasion, and heat resistance characteristics, and provides for high-impact and energy-absorbing properties over a wide range of ambient temperatures.

The ASTM D2000 Line Call for PPI 77400 is:

**4CA714, B35, C32, EA14, F17, G21, Z1, Z2, Z3, Z4**

Where: Z1: Compression Set 22 h @ 158 °F (70 °C) = 25% max  
Z2: Polymer Type = 100% EPDM  
Z3: Increase in Elongation from 200%  
Z4: Increase in Hardness from 70 Shore A

This rubber compound meets or exceeds the following requirements:

Property	Unit	Required	Actual	ASTM Test Method
Tensile Strength	psi	1400	1430	D412
Elongation at Break (Z3)	%	400	441	D412
Hardness – Durometer (Shore A)	points	73 ± 5	71	D2240
Heat Resistance 70 h @ 257 °F (125 °C)				D865
Change in Tensile Strength	%	±30	+1.5	
Change in Ultimate Elongation	%	max -50	-44.0	
Change in Hardness	points	±15	+2	
Compression Set				D395
22 h @ 158 °F (70 °C) Solid (Z1)	%	25 max	14.9	Method B
22 h @ 257 °F (125 °C) Plied	%	70 max	61.6	
Ozone Resistance, Bent Loop		No Cracks	No Cracks	D1149
70 h @ 104 °F (40 °C) @ 50 pphm			(Pass)	D1171
Tear Strength	lb/in	min 149	173	D624 Die C
Low Temperature Brittleness		No Cracks	No Cracks	D2137
3 min @ -40 °F (-40 °C) in methanol			(Pass)	
Water Resistance, Volume Change	%	±5	+1.5	D471
70 h @ 212 °F (100 °C)				
Volume Resistivity	Ω·cm	< 1.0 × 10 <sup>6</sup>	1.0 × 10 <sup>5</sup>	D257 Dry
Polymer Type (Z2)		100% EPDM	100% EPDM	

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