

Material Specification

PPI EPDM Rubber Railseal Compound

PPI 77301

Flexible rubber Railseal profiles manufactured by Performance Polymers Innovations Inc. are extruded using only the highest quality materials that are specifically compounded for demanding applications in the highway grade crossing and industrial environments. This rubber compound has superior 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 77301 is:

M4CA712, B35, C32, EA14, F17, G21, Z1, Z2, Z3

Where: Z1: Elongation was 200%
Z2: Added Compression Set 22 h @ 158 °F (70 °C)
Z3: Added Polymer Type
Z4: Added Volume Resistivity

This rubber compound meets or exceeds the following requirements:

Property	Unit	Required	Actual	ASTM Test Method
Tensile Strength	psi	1740	1965	D412
Elongation at Break (Z1)	%	400	469	D412
Hardness – Durometer (Shore A)	points	70 ± 5	75	D2240
Heat Resistance 70 h @ 257 °F (125 °C)				D865
Change in Tensile Strength	%	±30	-10.1	
Change in Ultimate Elongation	%	max -50	-42.5	
Change in Hardness	points	±15	+11	
Compression Set				D395
22 h @ 158 °F (70 °C) Solid (Z2)	%	25 max	22.6	Method B
22 h @ 257 °F (125 °C) Plied	%	70 max	59.8	
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	188	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	+2.8	D471
24 h @ 212 °F (100 °C)				
Volume Resistivity, Conditioned	Ω·cm	5.0 × 10 ¹	7.6 × 10 ¹	D991
16 h @ 23 °C and 50% RH				
Polymer Type (Z2)		100% EPDM	100% EPDM	