

# Precision Polymer Z85L

Acrylonitrile Butadiene Rubber  
Precision Polymer Engineering Ltd.

Message:

Z85L is a peroxide-cured, HNBR compound specially developed for service in low temperature applications. The high mechanical strength of Z85L provides excellent wear and abrasion resistant properties when used in dynamic applications. Its broad chemical resistance makes Z85L ideal for use with sour gas (H2S), crude oil, carbon dioxide and operating fluids including lubricators, drilling mud, oil additives and amine corrosion inhibitors.

Key Attributes

- Good explosive decompression resistance
- Outstanding low temperature performance
- Excellent chemical resistance
- Superior H2S resistance compared with standard HNBR
- High mechanical strength

Typical Applications

- Low temperature and high pressure environments
- Exploration and drilling equipment
- Cementing and completion equipment
- Subsea valves and pumps

General Information			
Features	High strength		
	Good wear resistance		
	Low temperature resistance		
	Good chemical resistance		
	Good wear resistance		
Uses	Pump parts		
	Low temperature application		
	Valve/valve components		
	Oil/Gas Supplies		
Appearance	Black		
Hardness	Nominal Value		Test Method
IRHD Hardness	85		ASTM D1415, ISO 48
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			
50% strain	5.50	MPa	
100% strain	16.0	MPa	
Tensile Strength (Yield)	18.3	MPa	ASTM D412, ISO 37
Tensile Elongation (Break)	200	%	ASTM D412, ISO 37
Compression Set (150°C, 24 hr)	21	%	ASTM D395, ISO 815
Aging	Nominal Value	Unit	Test Method
Change in Tensile Strength in Air (150°C, 70 hr)	10	%	ASTM D412, ISO 37

Change in Ultimate Elongation in Air (150°C, 70 hr)	-15	%	ASTM D412, ISO 37
Change in IRHD Hardness in Air (150°C, 70 hr)	9.0		ASTM D573, ISO 188
Thermal	Nominal Value	Unit	
Maximum Operating Temperature	160	°C	
Low Temperature Resistance - TR10	-46	°C	ASTM D1329
Additional Information	Nominal Value	Unit	Test Method

Minimum Operating Temperature: -50°C (-58°F)

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