

M SEALS LTPU-BL94

Low Temperature Hydrolysis Resistant Polyurethane

MATERIAL DATA SHEET (Version 6.0 – 05.2022)



Elastic Behaviour



Low Temperature



Description

M Seals material LTPU-BL94 is a 94a Shore hardness Hydrolysis Resistant Polyurethane (H-PU) which has been modified to provide excellent low-temperature flexibility and elasticity. This low-temperature flexibility makes this material an essential choice for agricultural machinery operating in the harshest low temperature climates.

Good physical characteristics and chemical resistance to the most common hydraulic industry fluids such as Mineral Oils, HFA, HFB and HFC make LTPU-BL94 a suitable seal for industrial applications operating in harsh conditions.

The use of LTPU-BL94 in water or water-based fluids such as Water Glycol (HFC) fluids should be limited to +40°C, otherwise material degradation may occur. Considering this material is meant for extreme low temperature use, this should not be an issue.

Physical Properties

Property	Test method	Unit	Typical value
Colour			Midnight Blue
Density	ISO 1183	g/cm ³	1.13
Hardness	ISO 868	Shore A	94 (+/-5)
Tensile Strength	DIN 53504	MPa	>45
Modulus 100%	DIN 53504	Mpa	>12
Modulus 300%	DIN 53504	Mpa	>22
Elongation at break	DIN 53504	%	>450
Tear strength	DIN 53515	KN/m	>80
Compression set (24 Hours @ 70°C, 25%)	ISO 815	%	>27
Compression set (24 Hours @ 100°C, 25%)	ISO 815	%	>30
Minimum service temperature		°C	-55
Maximum service temperature		°C	+110

Main Characteristics

- Excellent elastic behaviour
- Excellent low temperature flexibility
- Good rebound behaviour

Typical Products

- U-Seals/U-Rings
- Wiper Seals
- Static Seals & O-Rings

Typical Applications

Due to its excellent low temperature flexibility, elasticity and rebound behaviour, LTPU-BL94 Polyurethane can be used for rod seals, piston seals and static seals operating in severe low temperature hydraulic and pneumatic applications.

Tel: 0044 (0) 114 243 2777 . Fax: 0044 (0) 114 242 2300 . Mail: sales.esd@m-seals.co.uk . Web: www.m-seals.com

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