

M SEALS LTPU-BL94

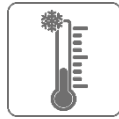
Low Temperature Hydrolysis Resistant Polyurethane



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.

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