



**ULTRA
PERFORMANCE**

Design Description

Ultra Performance has very good values for tensile strength, elongation at break and tear strength. The thermoset polyurethane has a wide range of properties, including fluid and moisture resistance. Polyurethane seals offer outstanding performance in high pressure hydraulic systems with abrasive contamination, high shock loads, and related adverse conditions.

Ultra performance polymer is Hydrolysis resistant, UV resistant and has superior mineral oil compatibility as well as great resistance to ozone attack and weathering. It also has a very low compression set. Its excellent wear resistance, high elasticity, high dynamic resistance as well as low permeability are just some of its other advantages. The outstanding toughness and abrasion of the material allows it to be suitable for high pressure applications.

Features

- Outstanding toughness & abrasion for high pressure applications
- Mineral oil compatibility is good
- Good resistance to ozone attack & weathering
- Excellent hot water resistance
- Low compression set
- Resistance in HFA, HFB and HFC hydraulic fluids

Properties	Specified	Unit	Value
Hardness	DIN 53505	Shore A	95 ± 2
Hardness	DIN 53505	Shore D	46 ± 2
Density	DIN 53479	g/cm ³	1.2
Tensile strength	DIN 53504	N/mm ²	48
Elongation at break	DIN 53504	%	430
Stress ratio 100%	DIN 53504	N/mm ²	17
Stress ratio 300%	DIN 53504	N/mm ²	38
Compression set 20 °C/24h	DIN 53517	%	11
Compression set 70 °C/70h	DIN 53517	%	24
Tear strength	DIN 53515	N/mm	110
Elastic recovery	DIN 53512	%	26
Abrasion	DIN 53516	Mg loss	27
Minimum application temperature		°C	-50
Maximum application temperature		°C	150
Elongation at break after 2000h			430
Storage in distilled water at 95 °C			430
Swell in water		%	0.3-0.4 max