

# MATERIAL DATA SHEET

## Max H-Pur

### GENERAL INFORMATION

Max H-Pur is a specially developed polyurethane system, scientifically formulated from a selection of high-quality chemical components to meet the increasing technical demands in the sealing industry.

It has been optimised in terms of its mechanical and tribological properties, resistance to chemicals and hydrolysis and high temperature stability (+ 150°C). It has high tensile strength, very high wear resistance, low hysteresis, good flexibility at low temperatures (-25 °C) and a low compression-set.

Special polymeric lubricants added to the formula ensure superior sliding properties (self-lubrication), significantly reduce friction ( $\mu < 0.2$ ) and prevent the stick-slip effect, thereby exceeding the performance of polyurethanes filled with solid lubricants (MoS<sub>2</sub>).

Max H-Pur shows excellent performance in oil hydraulic applications, in sub-sea and natural water applications at elevated temperatures, in cleaning processes in the food/beverage industry, in sour oils and gases in O&G industry, in flame retardant hydraulic fluids (HFA- HFB fluids in mining cylinders and hydr. presses), as well as in biological degradable fluids (vegetable oils and synthetic esters).

It is made available in different colors - red, green, blue, turquoise, natural and dark grey – commonly used in the lathe-cut sealing industry.

Max H-Pur in red, blue and natural colour comply with the FDA CFR 177.2600 food standard.

### MECHANICAL | ELECTRICAL | THERMAL PROPERTIES

Hardness at 20°:	DIN 53505	Shore A	95 +/-3
Hardness at 20°:	DIN 53505	Shore D	45 +/-3
Density:	DIN ISO 1183-1	g/cm <sup>3</sup>	1.21
100% Modulus:	DIN 53504	N/mm <sup>2</sup>	> 11.5
300% Modulus:	DIN 53504	N/mm <sup>2</sup>	> 28.5
Tensile strength:	DIN 53504	N/mm <sup>2</sup>	> 45
Elongation at break:	DIN 53504	%	> 370
Rebound resilience:	DIN 53512	%	> 28
Tear strength:	DIN ISO 34-1	N/mm <sup>2</sup>	> 100
Abrasion:	DIN 53516	mm <sup>3</sup>	< 16
Coefficient of friction (dyn.):	ASTM D1894	$\mu$	< 0.2
Compression set:*	DIN ISO 815-1	%	< 17
Compression set:**	DIN ISO 815-1	%	< 21
Compression set:***	DIN ISO 815-1	%	< 84
Min. service temperature:		°C	- 25
Max. service temperature (short term):		°C	+ 150 (+ 165)
Tg Glass Transition Temp.:		°C	- 24

\* Compression set @ 70°C, 24 hours, 10% deflexion

\*\* Compression set @ 100°C, 24 hours, 10% deflexion

\*\*\* Compression set @ 150°C, 24 hours, 10% deflexion

### REMARK

All test methods and values stated above are corresponding to ASTM | DIN | ISO standards and have been tested on standardized plates in the laboratory. All tests are made under laboratory conditions.

This information does not except our customers to test our products for its suitability for the intended application.

Utilization, processing and application of our products are out of our control and therefore our customers responsibility, also in terms of any protective rights of any third party.