

KOLBEN Premium Pro

UPA1003® Polyurathane

High Temperature Nanotechnology



The life of seal will be extended with strict heat operation.

KOLBEN UPA1003® Polyurathane is developed by R&D in high performance hydraulic sealing.

The necessity of UPA1003® that can withstand **higher temperatures** is common in aerospace, automotive, composite, modelling, and design industries.

The new UPA1003® increases the high temperature operating window for seals from 100°C to 160°C for continuous use in many applications and can withstand brief excursions up to 180°C without leakage.



KOLBEN UPA1003® are designed and synthesised to provide **superior mechanical performance at elevated temperatures** with the same batch to batch consistency and ease of downstream processing

It keeps the most important roles of hydraulic cylinders. K620 is a best of range **high pressure and temperature performance**. KOLBEN UPA1003® is **superior excellent** material that used to **draconic** application. This is one of **best material** over the world.

Product Features:

- Withstands excursions up to 430 °F / 160 °C
- Super excellent wear & abrasion resistance.



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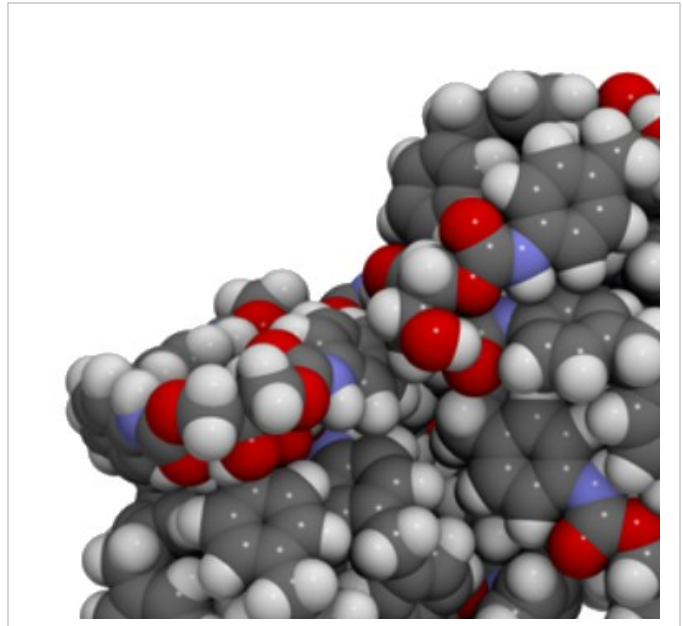
High Performance & Temperature Sealing

Development Trends Of The Times

The life of seal

KOLBEN UPA1003® lasted 40% longer than the leading competitor before a leak was detected. More importantly, UPA1003® ability to retain sealing force minimized leaking as the test continued compared to the leading competitor which failed catastrophically.

Whether your challenge is short term, high temperature exposure or longer seal life, KOLBEN UPA1003® can help you achieve your goals.



Physical properties		KOLBEN UPA1003®	
Hardness	DIN 53 505	Shore A	93 +/- 2
Density	DIN EN ISO 1183-1	g/cm ³ lb/in ³	1.20 +/- 0.02 0.043 +/- 0.0007
Modulus 100 %	DIN 53 504	N/mm ² psi	14 2,030
Ultimate Tensile Strength [MPa]	BS ISO 37:2011	Mpa	38.2
Ultimate Elongation at Break [%]	BS ISO 37:2011	%	840
Lupke Rebound Resilience	BS ISO 4662: 2009		72
Tear Strength	DIN ISO 34-1	/mm ² psi	90 13,050
C.S. 70h/70°C 70h/158°F	DIN ISO 815 (B)	%	23
C.S. 70h/100°C 70h/212°F	DIN ISO 815 (B)	%	37
Melt Temperature [°C]		°C	210-240
Temperature range	oC -35°C to +160°C		