

Datasheet - glycol-cross linked Vulkollan®

Mechanical properties of glycol-cross linked Vulkol

Mechanical characteristics

Mechanical characteristics of glycol-cross linked VULKOLLAN® predominantly becomes within the hardness range of approx. 80 shores A to 45 shores D manufactured.

For "specials", softer or harder PU, they are also possibilities.

The following tables and diagrams give an overview of the characteristics of the VULKOLLAN® types, which are most frequently used in practice. The data mentioned originate from individual measuring and can be considered therefore only as arranging sizes.

Property	Test specification	Units	Vulkollan hardness			
			83	89	92	94
Shore Hardness A	DIN 53505	-	83	89	92	94
Stress at 100% strain	DIN 53504	MPa	4,3	5,9	8,0	10,6
Stress at 300% strain	DIN 53504	MPa	7,8	10,4	12,8	15,8
Tensile strength	DIN 53504	MPa	44	43	41	35
Elongation at break	DIN 53504	%	663	696	741	702
Tear propagation resistance	DIN 53515	kN/m	25	31	48	57
Rebound resistance	DIN 53512	%	65	64	62	61
Abrasion resistance	DIN 53516	mm ³	37	32	28	26
Compression set 70 ours/23°C 24 ours/70°C	DIN 53517	%	12 20	12 20	12 20	13 21

Torsion vibration attempt

The torsion vibration attempt shows the viscoelastic behaviour of Vulkollan in a temperature range of -60°C up to + 200 degrees Celsius.

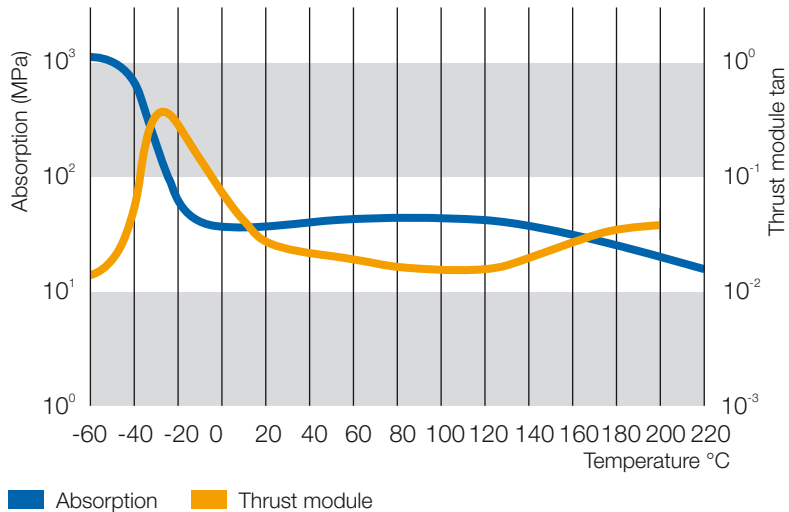
Between -10°C and approx. +120°C the shear modulus is almost constant.

In practice the permissible usual operating temperature lies with maximally +80°C.

Temperatures up to + 120°C are only briefly permissible. Compared with other PU elastomers, Vulkollan has a smaller absorption.

During dynamic load this leads to a lower internal heating up; a crucial advantage, which comes in particular with role linings and spring elements to carrying.

Torsion test: Vulkollan 92 Shore A



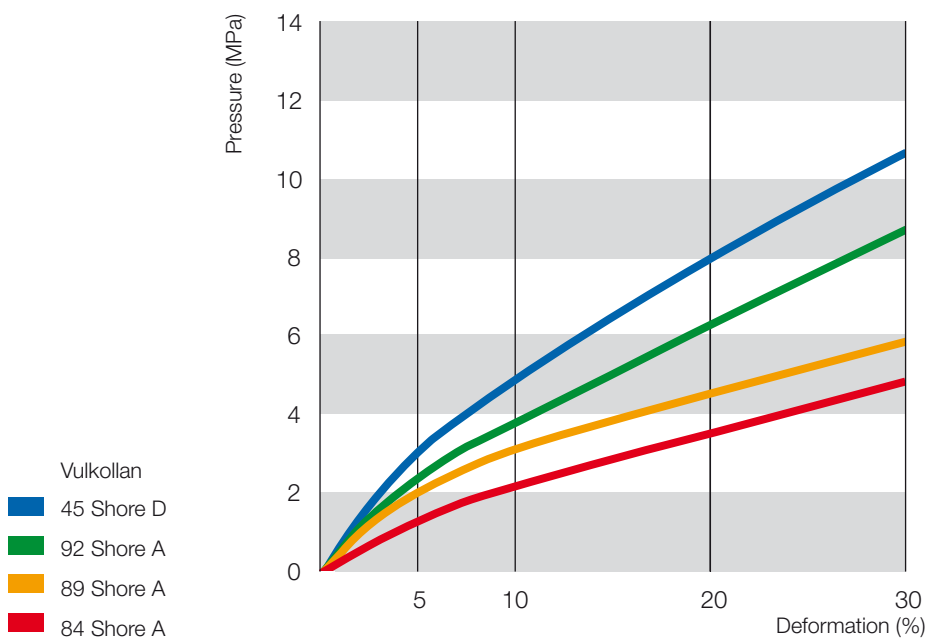
Behaviour under pressure load at different temperatures

The following curves show the pressure behaviour of different Vulkollan types at low and high temperatures. Before the measurement a conditioning took place via a twice preloading, in order to consider the setting behaviour.

The pressure deformation curves for Vulkollan run, as linear with all elastomers, only at the beginning of the load.

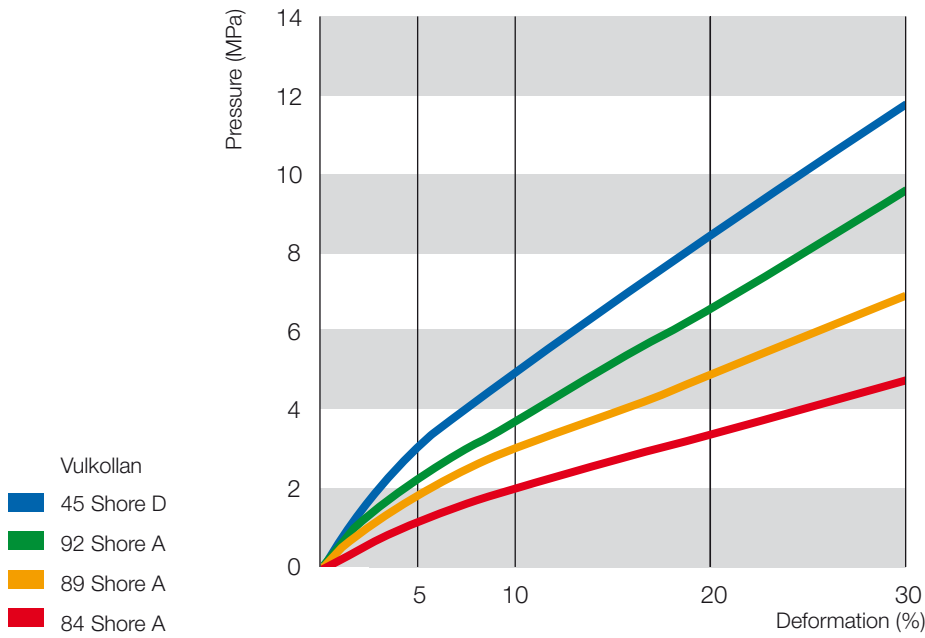
The pressure deformation curves show the extraordinary thermal stability of Vulkollan: it should be noted that the deformation with 20 and 80°C degrees differ only from very little.

Only under long continuous, high specific application of strength at high temperatures, Vulkollan is inclined more strongly to creeping.



Deformation at 0°C (deformation speed: 10mm/min)

This information is, to the best of our knowledge, accurate and reliable to the date indicated. The above mentioned data have been obtained by tests we consider as reliable. We don't assure that the same results can be obtained in other laboratories, using different conditions by the preparation and evaluation of the samples.



Deformation at 80°C (deformation speed: 10mm/min)