



P+S

AUTHORIZED
ELASTICITY

DYNAMIC

RESILIENT

DAMPING

STRESS

POLYURETHANE

RESISTANCE

SHORE HARDNESS

ELASTOMERS

CUT RESISTANCE

STRUCTURAL STRENGTH

ECONOMICAL

DIMENSIONALLY STABLE

VULKOLLAN WEAR
VERSATILE



THE MOST POWERFUL CLASSIC

VULKOLLAN®*

FOR MAXIMUM DYNAMIC STRESS

With its numerous field of applications, Vulkollan® can be called a real godsend. With its impressive mechanical and dynamic material properties, this polyurethane-elastomer with a massive structure has been synonymous with high performance since long time. The basic components of Vulkollan are a polyester polyol and a di-isocyanate, added special chain extenders for precise adjustment of the desired final properties.

Only a small number of selected companies are licensed to use the trademark „Vulkollan®“ of COVESTRO DEUTSCHLAND AG to use and to process Vulkollan®.

The strictly defined materials for the production of Vulkollan® are continually tested consistent material checks - the best guarantee of a steady quality elastomer with the highest standards

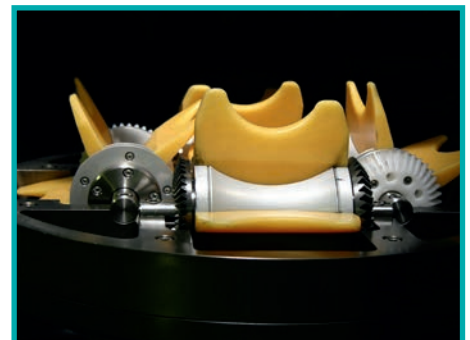
Moulded and semi-finished Vulkollan® parts are used wherever maximum wear resistance and mechanical and physical stress resistance are required.

The hardness range of Vulkollan® is measured both in Shore A and Shore D. The range extends from about 80 to 97 Shore A, or 30 to 45 Shore D. In practice the hardness settings of Vulkollan® can achieve elasticity as rubber on one side, and the rigidity of thermoplastic materials on the other side.

*The name Vulkollan® is a registered trademark of COVESTRO DEUTSCHLAND AG.

At a glance: the profile of properties

- excellent mechanical wear resistance
- high impact resilience, even with hard settings
- high tear resistance
- low compression set
- hardness range 80 to 97 Shore A
- good resistance to mineral oils, greases, petrol and various solvents
- good resistance to ozone, UV radiation and high-energy radiation
- temperature range of -30°C to + 80°C
- special qualities approved according to LFGB (Food, Commodities and Feed Code)
- hydrolysis-resistant settings





THE MOST POWERFUL CLASSIC

VULKOLLAN®

EXCELLENT WEAR RESISTANCE

Applications overview

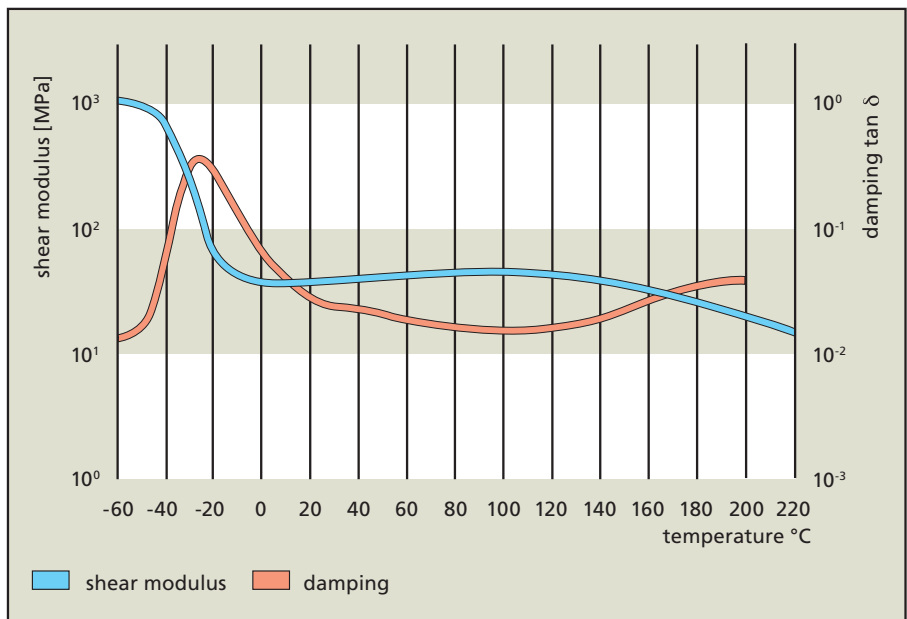
- lift technology
- automotive engineering
- transport and conveyor technology
- ground care equipment
- crane engineering
- paper and printing technology
- leisure sports and amusement
- cutting technology
- beverage industry
- coupling technology
- textile industry
- transmission technology
- food processing industry

Vulkollan® is applicable between -30°C and $+80^{\circ}\text{C}$ (for short periods up to $+130^{\circ}\text{C}$). The modulus of elasticity and thereby the deformation resistance is from -10°C to $+100^{\circ}\text{C}$ almost constant. Systems with a very good cold flexibility lose their rubber elasticity at about -30°C , without getting brittle. Depending on hardness and temperature influence the modulus of elasticity range of Vulkollan® is between 10 and 600 MPa.

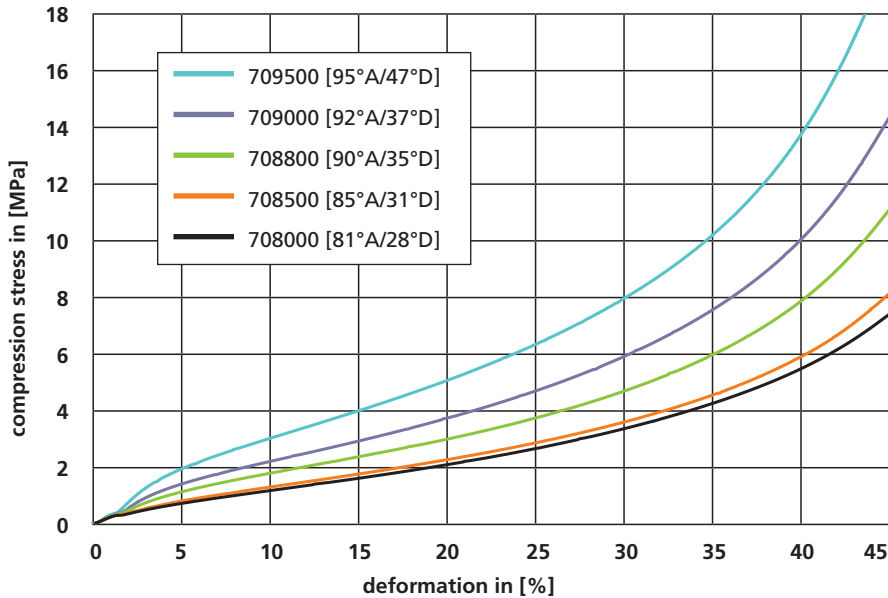
Under different stress conditions, the wear resistance of Vulkollan® is better than most other elastic materials.

At so-called wet wear, at usage of a lubricant, for example water, oil or other liquid against the friction partner; Vulkollan® can be even more wear-resistant than steel.

Vulkollan® is also well suited for use as a construction material for damping high frequency vibrations in vehicles and machines. Damping elements should be dimensioned in a way that the occurring by converting mechanical energy into heat temperature does not exceed about 80°C in continuous operation in the inner part.



Vulkollan compression stress diagram



Pressure-strain diagram of Vulkollan several hardnesses, considering a sample with Ø 50mm x height 25mm, strain rate 50mm/min.

physical properties and data

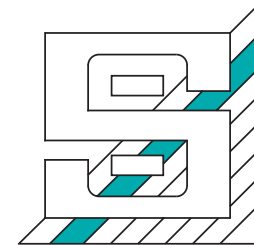
Vulkollan® – 70 80 00 / 70 85 00 / 70 88 00 / 70 90 00 / 70 95 00

property	test specification	units	data				
			70 80 00	70 85 00	70 88 00	70 90 00	70 95 00
physical test value	DIN ISO						
shore hardness A	53 505	-	81	85	90	92	95
density	53 479 1183	g/cm ³	1,17	1,20	1,21	1,24	1,26
stress at 100% strain	53 504 37	MPa	4,3	5	5,9	8	10
stress at 300% strain	53 504 37	MPa	7,8	9	10	12	15
tensile strength	53 504 37	MPa	49,7	51	53	52	42
elongation at break	53 504 37	%	660	670	680	740	780
tear propagation resistance	53 515 34-1	kN/m	30	33	38	53	65
rebound resilience	53 512 4662	%	60	58	58	56	56
abrasion loss	53 516 4649	mm ³	37	35	32	28	26
max. temperature resistance	-	°C	-30 +80	-30 +80	-30 +80	-30 +80	-30 +80
compression set							
70 h 23°C	53 517	%	8	9	9	11	14
24 h 70°C	815	%	18	20	20	20	21

Reserve technical changes!

Product overview

- solid tires
- coupling elements
- drive rollers
- pressure rollers
- printing and cutting bars
- pallet truck rollers
- repository damper
- spring elements
- vibration
- drive bearings
- strippers
- roller coatings
- friction damper
- and semi-finished products for individual further processing



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