



P+S Polyurethan-Elastomere
GmbH & Co. KG

Vulkocell

The convenient addition when it comes to vibration technology

For high dynamic load capacity and low deformation

Vulkocell®

With its microcellular structure, Vulkocell® offers exceptional volume compressibility with minimal transverse expansion, making it particularly suitable for compact designs and vibration-sensitive applications. Frequently used in auxiliary springs, shock

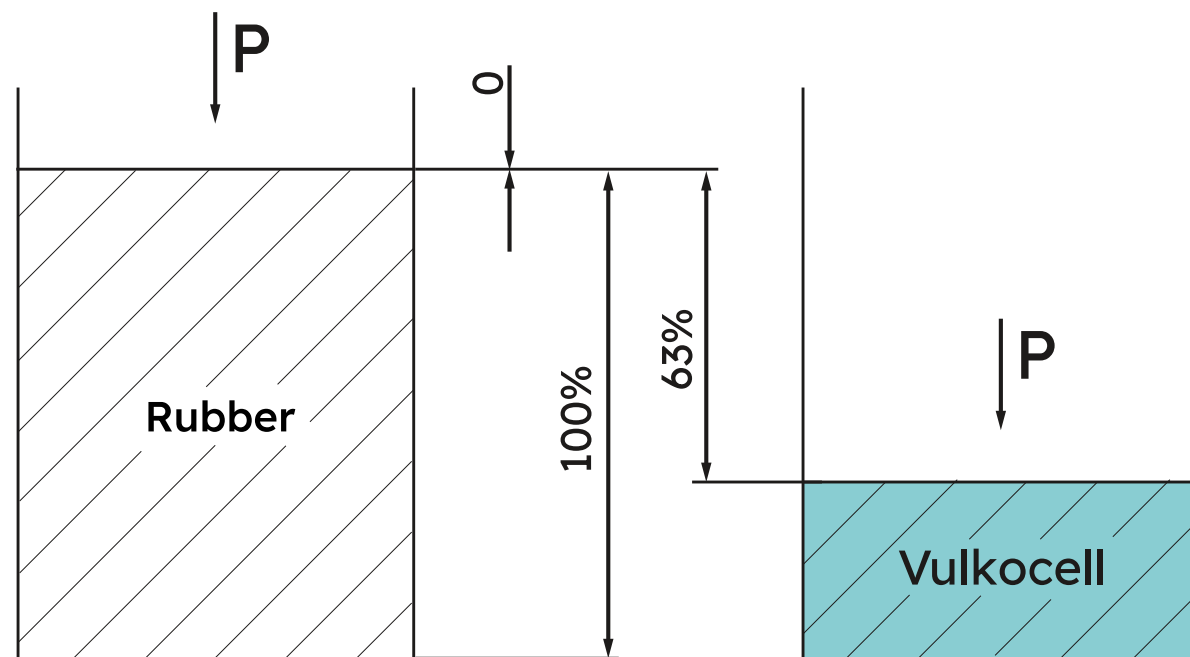
absorbers and seals, Vulkocell® ensures safety and suspension comfort. Even for more humid applications, we offer solutions made from hydrolysis-stabilised Vulkocell, which impress with their exceptional resistance.

Vulkocell property profile

- High force absorption
- Uniform pressure deformation behaviour
- High volume compressibility with low transverse elongation
- Good resistance to mineral oils and greases
- Good resistance to ozone and UV radiation.
- Temperature range from -30°C to +80°C (with a special formulation down to -60°C)
- Hydrolysis-resistant settings also available on request
- Special qualities approved by the LFGB

Application-specific products

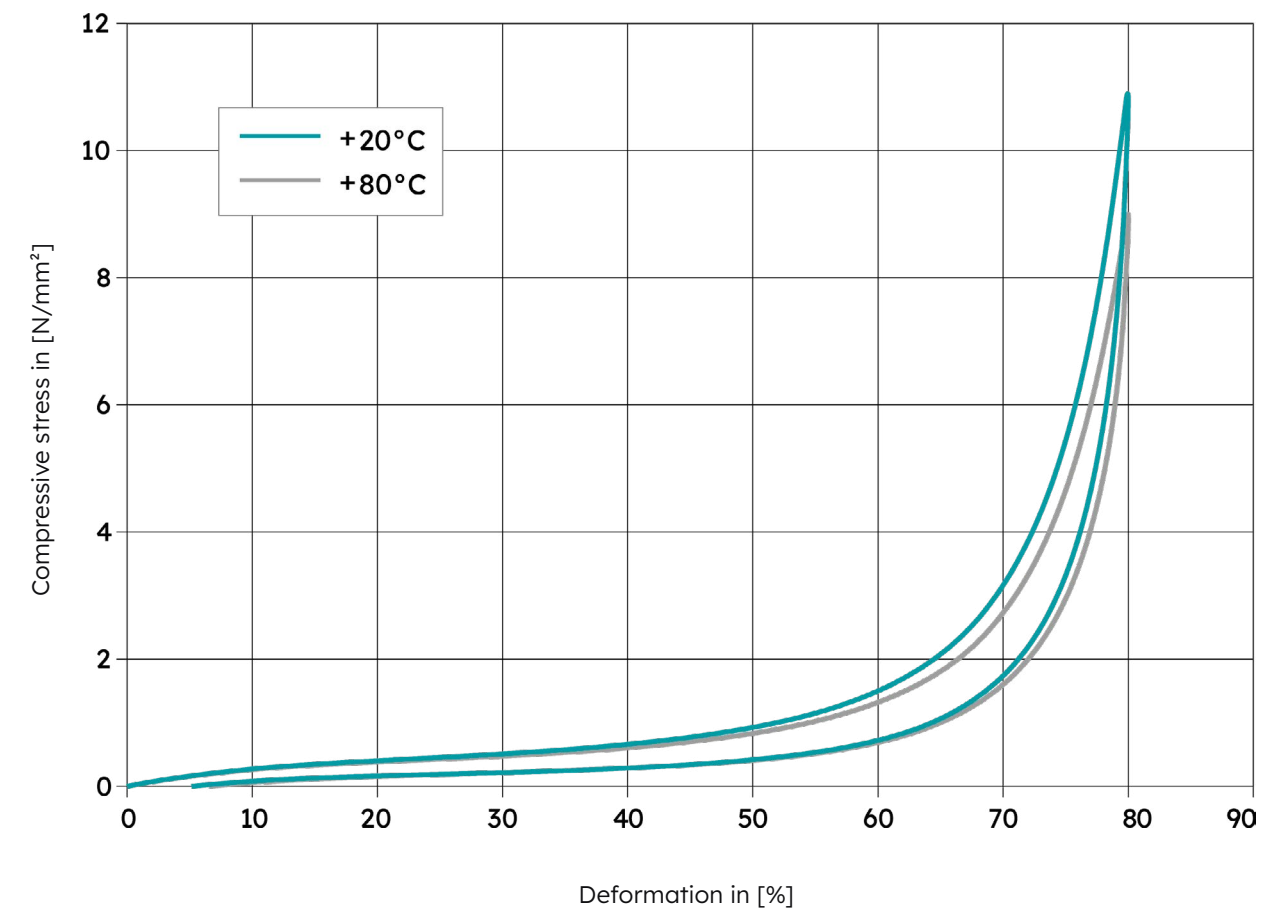
- Additional springs and elastomeric springs
- Pressure bars
- Sealing elements
- Semi-finished products for further processing



Compression in an enclosed space.

Vulkocell NH 24-50

Compressive stress at different temperatures



The shear modulus of Vulkocell remains virtually constant between -10°C and +120°C. Its deformation behaviour remains the same at a wide range of temperatures – which is often a decisive criterion when selecting materials. Another advantage is its good cold flexibility: hardening only occurs below -30°C. The permissible operating temperature in heat is 80°C. The material can also be used and subjected

to stress at temperatures of up to +120°C for short periods. Under dynamic long-term stress, Vulkocell's properties change only gradually: whether at room temperature or at 80°C, the spring characteristic curve always remains in the same order of magnitude. Even after a million compressions, the permanent deformation is minimal.

Areas of application for Vulkocell

- Vehicle construction
- General mechanical engineering
- Rail vehicles
- Agricultural engineering
- Elevator technology
- Printing technology
- Orthopaedics
- Construction machinery
- Beverage industry
- Measurement and radio technology
- Port technology
- Special vehicles

Mechanical and physical properties

of Vulkocell materials

Material: Vulkocell NH 24

Property	Basis for testing	Unit of measure	Measured values						
Designation	-	-	NH 24-35	NH 24-40	NH 24-45	NH 24-50	NH 24-55	NH 24-60	NH 24-65
Density	DIN 53 420 ISO 845	g/cm ³	0,35	0,40	0,45	0,50	0,55	0,60	0,65
Breaking stress	DIN 53 571 ISO 1798	N/mm ²	4,0	4,50	5,50	6,50	7,50	8,0	8,50
Breakage extension	DIN 53 571 ISO 1798	%	390	405	425	450	460	470	480
Tear resistance (Graves)	DIN 53 515 ISO 34-1	kN/m	8	10	12	14	18	20	22
impact elasticity	DIN 53 512 DIN 4662	%	60	60	60	60	60	60	60
Compression set	DIN 53 572 ISO 1856	70 h - 23°C	2,5	3,0	3,5	3,5	3,5	4,0	4,0
		24 h - 70°C	5,0	5,5	6,0	7,0	7,5	8,0	8,5

Property		Measured values						
Average compressive stress [N/mm ²]	Deformation	NH 24-35	NH 24-40	NH 24-45	NH 24-50	NH 24-55	NH 24-60	NH 24-65
	20%	0,26	0,32	0,38	0,50	0,63	0,71	0,85
	30%	0,32	0,40	0,46	0,60	0,79	0,89	1,08
	40%	0,40	0,49	0,56	0,77	1,00	1,14	1,39
	50%	0,52	0,65	0,76	1,05	1,36	1,93	2,35
	60%	0,77	1,00	1,19	1,68	2,15	2,71	3,09
	70%	1,50	1,99	2,46	3,56	4,56	5,82	6,93

Temperature range:
- 30 up to + 80 °C

Colour:
Light beige to dark brown
(change due to UV exposure)

Special features:
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Area of application:
Suspension, seal, vibration isolation

Material: Vulkocell H-NH 24

Property	Basis for testing	Unit of measure	Measured values					
Designation	-	-	H-NH 24 - 35	H-NH 24 - 40	H-NH 24 - 45	H-NH 24 - 50	H-NH 24 - 55	H-NH 24 - 60
Density	DIN 53 420 ISO 845	g/cm ³	0,35	0,40	0,45	0,50	0,55	0,60
Breaking stress	DIN 53 571 ISO 1798	N/mm ²	2,30	3,00	3,10	3,80	5,50	5,80
Breakage extension	DIN 53 571 ISO 1798	%	360	370	320	350	450	420
Tear resistance (Graves)	DIN 53 515 ISO 34-1	kN/m	12	13	12	17	21	22
impact elasticity	DIN 53 512 DIN 4662	%	70	71	72	73	74	75
Compression set	DIN 53 572 ISO 1856	70 h - 23°C	4,0	4,0	5,0	4,0	5,0	4,0
		24 h - 70°C	7,0	7,0	8,0	7,0	8,0	10,0

Property		Measured values					
Average compressive stress [N/mm ²]	Verformung	H-NH 24 - 35	H-NH 24 - 40	H-NH 24 - 45	H-NH 24 - 50	H-NH 24 - 55	H-NH 24 - 60
	20%	0,23	0,30	0,44	0,50	0,64	0,94
	30%	0,30	0,37	0,56	0,63	0,86	1,25
	40%	0,41	0,48	0,75	0,79	1,18	1,65
	50%	0,56	0,68	1,13	1,20	1,85	2,57
	60%	1,01	1,27	2,10	2,34	3,79	4,98
	70%	2,60	3,07	5,07	6,47	10,00	12,00

Temperature range:
- 60 up to + 80 °C

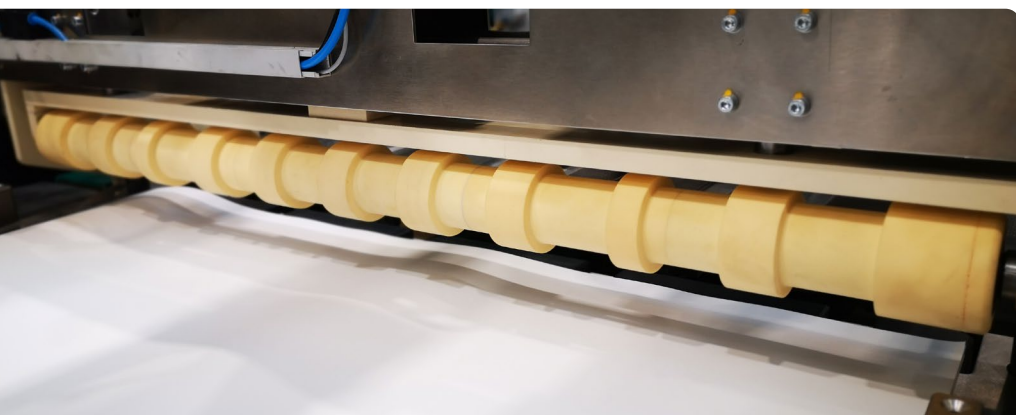
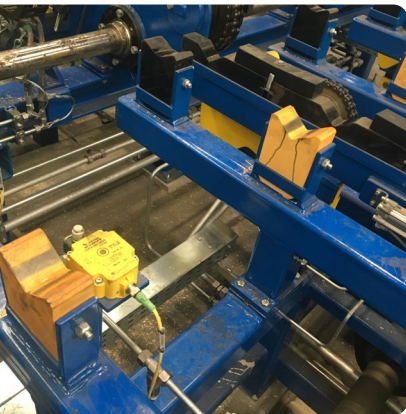
Colour:
Light beige to dark brown
(change due to UV exposure)

Special features:
Hydrolysis-resistant, cold-flexible

Area of application:
Suspension, seal, vibration isolation

Application examples for Vulkocell at a glance

- Joint seals
- Additional springs
- Pressure strips
- Cable spring buffers in lift construction
- Shock absorbers
- Spring elements in vehicle construction
- Roller coatings
- Scraper rings
- Chair springs
- End stops Transport and grinding rollers
- Bottle plates
- Pressure pieces
- Cuffs
- Roller blinds
- As well as plates and cut-to-size pieces for individual further processing





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