



P+S Polyurethan-Elastomere
GmbH & Co. KG

Diepothan

For maximum flexibility

For extreme loads

Diepothan®

The material Diepothan is a polyurethane elastomer with a solid structure and is similar to Vulkollan in terms of its properties. Developed and customized and made by our company, this material is characterized by a very advantageous combination of physical and chemical properties. This enables a wide range of applications (polyester-based and/or

polyether-based) – especially when extreme requirements have to be met. Mouldings made of Diepothan impress with their extreme resilience and can be found in many areas of general mechanical engineering – especially in applications with low Shore hardness and high, consistent elasticity.

Property profile of Diepothan

- Excellent mechanical wear resistance
- High impact elasticity even with hard settings
- High tear resistance
- Low compression set
- Hardness range 50 Shore A to 98 Shore A or up to 64 Shore D
- Good resistance to mineral oils, greases, gasoline, and various solvents
- Good resistance to ozone and UV radiation
- Temperature range from -30°C to +80°C

Products specially developed by P+S:

- High-quality wheels and casters
- Semi-finished products for mechanical processing
- Spring elements and elastomer springs
- Bearing bushings and end stops



Effective cushioning of moving masses

Diepothan®

Diepothan exhibits low swelling behavior when exposed to water. Diepothan is available in Shore hardness ranges from 50 Shore A to 98° Shore A (up to 64 Shore D) and is free of plasticizers. In addition, Diepothan is characterized by its good resistance to mineral oils and greases. It can be used in long-term operation over a wide temperature range. This ranges from -30°C to +80°C. Every day, we receive a great variety of challenges from our customers. Thanks to our numerous specially adapted Diepothan grades,

which can be adjusted to different customer requirements, Diepothan is suitable for solving a diverse set of tasks. Thanks to the possibility of producing hydrolysis-resistant formulations, our Diepothan products can also be used in both seawater and tropical areas with high humidity. In addition, formulations for the food industry are also approved in accordance with the German Food, Consumer Goods, and Feed Code (LFGB).

Areas of application for Diepothan

- Shipbuilding
- Transport technology
- Pipeline service
- Competitive sports
- Agricultural industry
- Paper and printing technology
- Mechanical engineering
- Conveyor systems
- Vehicle technology
- Cardboard production
- Leisure facilities
- Municipal technology
- Internal transport

Mechanical and physical properties of Diepothan materials

Material: Diepothan 76

Property	Basis for testing	Unit of measure	Measured values								
Designation	-	-	76 60 10	76 65 10	76 70 10	76 75 10	76 80 10	76 85 10	76 90 10	76 93 10	76 97 10
Hardness	DIN 53 505 ISO 48-4	Shore A	60	65	70	75	80	85	90	93	97
Density	DIN 53 479 ISO 1183	g/cm³	1,20	1,20	1,20	1,20	1,20	1,20	1,20	1,20	1,20
Impact elasticity	DIN 53 512 DIN 4662	%	38	37	37	38	37	39	39	38	33
Abrasion loss	DIN 53516 ISO 4649	mm³	72	75	68	71	67	70	68	69	70
Compression set	DIN 53 572	70 h - 23°C	%	15,0	16,0	18,0	20,0	21,0	23,0	26,0	28,0
	ISO 1856	24 h - 70°C	%	30,0	31,0	36,0	42,0	47,0	54,0	56,0	58,0



Property	Basis for testing	Unit of measure	Measured values								
Designation	-	-	70 60 10	76 65 10	76 70 10	76 75 10	76 80 10	76 85 10	76 90 10	76 93 10	76 97 10
Stress at 100% elongation	DIN 53 504 ISO 37	Mpa	1,90	2,40	2,90	3,20	4,20	5,90	6,70	8,90	13,00
Stress at 300% elongation	DIN 53 504 ISO 37	Mpa	3,10	3,50	4,50	4,90	6,70	8,50	11,00	14,50	18,40
Breaking stress	DIN 53 504 ISO 37	Mpa	28,0	30,0	33,0	35,0	38,0	45,0	52,0	55,0	59,0
Elongation at break	DIN 53 504 ISO 37	%	810	810	800	760	720	690	650	610	500
Tear resistance (Graves)	DIN 53 515 ISO 34-1	kN/m	42	49	61	67	75	88	102	120	160

Temperature range:
- 30 to + 80 °C

Color:
Black as standard
(other colours available on request)

Special features:
Adjustable to specific environmental influences, soft material settings possible

Area of application:
Suspension, roller lining, seal, scraper, buffer and various special components

Material: Diepothan 73

Property	Basis for testing	Unit of measure	Measured values						
Designation	-	-	73 56 00	73 60 00	73 65 00	73 75 00	73 82 00	73 87 00	73 93 00
Hardness	DIN 53 505 ISO 48-4	Shore A	56	60	65	75	82	87	93
Density	DIN 53 479 ISO 1183	g/cm³	1,17	1,17	1,17	1,17	1,18	1,19	1,20
Impact elasticity	DIN 53 512 DIN 4662	%	68	68	68	55	53	50	41
Abrasion loss	DIN 53516 ISO 4649	mm³	25	25	25	25	25	25	35
Compression set	DIN 53 572	70 h - 23°C	%	6,0	7,0	8,0	9,0	11,0	12,0
	ISO 1856	24 h - 70°C	%	39,0	42,0	45,0	50,0	50,0	45,0



Property	Basis for testing	Unit of measure	Measured values						
Designation	-	-	73 56 00	73 60 00	73 65 00	73 75 00	73 82 00	73 87 00	73 93 00
Stress at 100% elongation	DIN 53 504 ISO 37	Mpa	1,90	2,20	2,50	3,30	4,50	6,60	11,00
Stress at 300% elongation	DIN 53 504 ISO 37	Mpa	3,50	4,00	5,00	7,50	11,00	16,00	25,00
Breaking stress	DIN 53 504 ISO 37	Mpa	21,0	23,0	25,0	42,0	42,0	42,0	40,0
Elongation at break	DIN 53 504 ISO 37	%	420	450	475	440	440	410	370
Tear resistance (Graves)	DIN 53 515 ISO 34-1	kN/m	8	10	10	15	20	30	55

Temperature range:
- 30 to + 80 °C

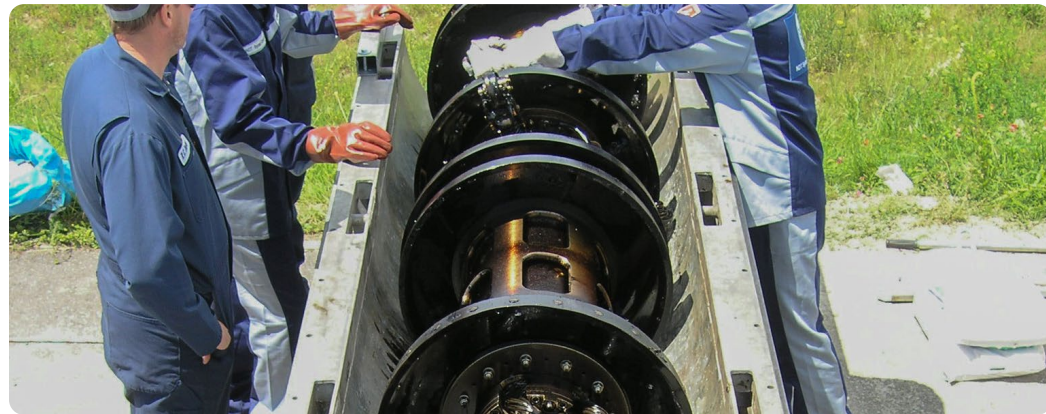
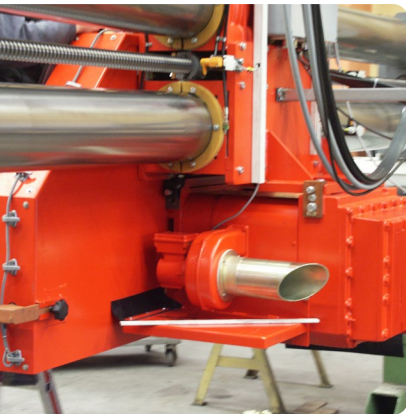
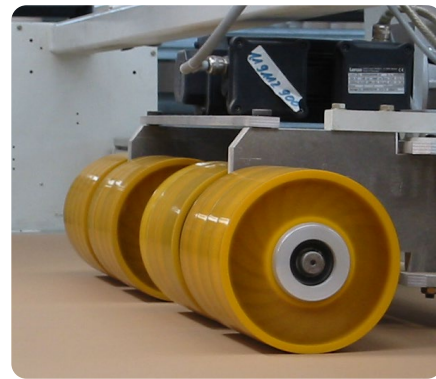
Color:
Black as standard
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Special features:
Adjustable to specific environmental influences, soft material settings possible

Area of application:
Suspension, roller lining, seal, scraper, buffer and various special components

Overview of application examples for Diepothan

- Fenders and fender strips in shipbuilding
- Glass load carriers
- Skids and pot collars in pipeline service
- Pressure rollers
- Rollers for competitive sports
- Grippers
- Drivers and bearing bushings
- Drive and transport rollers
- No-crush rollers
- Scrapers
- Elastomer springs
- Membranes
- Cutting strips
- Silencers
- Brake rings
- As well as semi-finished products for individual further processing





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