

P+S

DURABLE
RESISTANT TO HYDROLYSIS

LIFE QUALITY

VIBRATION DECOUPLING

POLYURETHAN ELASTOMERS

HIGHLY RESILIENT

DYNAMIC ACOUSTICS

COMFORT

DIEPOLAST

WORKING CLIMATE

PROTECTION

SUSPENSION

SOUNDPROOFING

THEATRE STAGE

VIBRATION

ELASTIC

APPRECIATION

LIFESPAN



EXCELLENT MATERIAL

DIEPOLAST®

IDEAL FOR VIBRATION ISOLATION

Diepolast

Diepolast is a high-tech, mixed-cellular elastomer consisting of a special polyether-urethane.

The material is used for vibration decoupling in mechanical engineering as well as in construction industry. Our Diepolast has excellent properties both under compression and thrust loads.

The 13 base types Diepolast SD10 – Diepolast SD1900 are available, enabling solutions for almost every application. The desired requirements can be fulfilled by the choice of the respective type, the supporting surface and the height.

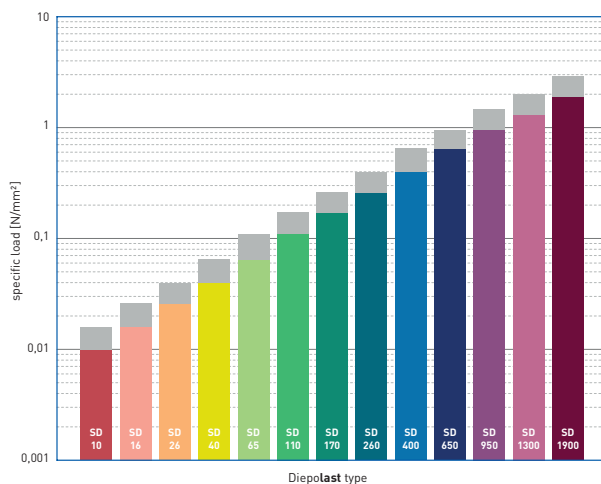
In addition to the flat sheet material, it is also possible to produce technical moulded parts made of Diepolast.

If necessary, special types can be produced with precisely matching strength. The special properties of the material will be adjusted. Colour changes are possible. Such special designs require a minimum production quantity, differing by type.

In contrast to non-cellular elastomers, Diepolast has gas volumes enclosed in the fine-cell structure. Accordingly, the material is compressible both in static and dynamic stress. It is therefore also suitable for shallow construction sites in situ concrete way.

At a glance: the profile of properties

- large load ranges
- good vibration damping/-isolation
- for pressure and thrust loads
- good resistance to hydrolysis
- temperature range of – 30°C bis + 70 °C
- low compression set
- good decoupling effect
- usable for isolation of source and/or recipient
- good resistance to mineral oils, greases and various solvents



Diepolast series
Working range





EXCELLENT MATERIAL

DIEPOLAST®

IDEAL FOR VIBRATION ISOLATION

Applications overview:

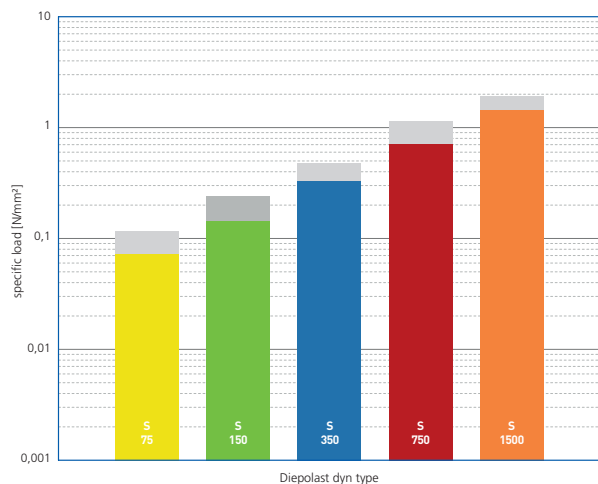
- construction industry
- general engineering
- transport and conveyor technology
- civil engineering
- lift technology
- sanitary technology
- heating, air condition and ventilation systems
- medical technologies
- pre-fabricated house production

Diepolast dyn

Diepolast dyn is a closed-cell high-tech elastomer and consists of a special polyether-urethane. Due to its structure, this material absorbs almost no fluids and can thus also be used in oppressive groundwater.

The 5 basic types Diepolast dyn S75 – Diepolast dyn S1500 are available, enabling solutions for almost every application. The desired requirements can be fulfilled by the choice of the respective type, the supporting surface and the height.

Due to its excellent dynamic properties, Diepolast dyn is also suitable for difficult applications. Our product range offers special types for heavy load foundation bearer and dynamic loads up to 9 N/mm² (load peaks even up to 18 N/mm²). These types are called Diepolast dyn HL and are available upon request.



Diepolast dyn series
Working range



DIEPOLAST SD

Properties	SD 10	SD 14	SD 20	SD 26	SD 35	SD 46	SD 61	SD 80	SD 105	SD 135	SD 170	SD 210	SD 260	SD 320	SD 390	SD 470	SD 560	SD 660	SD 780	SD 920	SD 1080	SD 1260	SD 1460	Test method	
Colour	red	pink	orange	yellow	bright green	green	dark green	petrol	blue	dark blue	dark violet	violet	bordeaux red												
Static loads [N/mm ²] ^[1]	0.010	0.016	0.026	0.040	0.065	0.110	0.170	0.260	0.400	0.650	0.950	1.300	1.900												
Dynamic loads [N/mm ²] ^[1]	0.016	0.026	0.040	0.065	0.110	0.170	0.260	0.400	0.650	0.950	1.450	2.000	2.800												
Load peaks [N/mm ²] ^[1]	0.5	0.7	1.0	2.0	2.5	3.0	3.5	4.0	4.5	5.5	6.0	6.5	7.0												
Mechanical loss factor ^[2]	0.25	0.24	0.22	0.15	0.18	0.12	0.13	0.11	0.10	0.10	0.10	0.09	0.09	DIN 53513 ^[3]											
Static E-modulus [N/mm ²] ^[2]	0.048	0.111	0.129	0.316	0.453	0.861	0.931	1.64	2.72	4.57	8.16	12.0	20.4	DIN 53513 ^[3]											
Dynamic E-modulus [N/mm ²] ^[2]	0.144	0.328	0.443	0.743	1.06	1.86	2.27	3.63	5.27	10.4	21.5	35.2	78.2	DIN 53513 ^[3]											
Resistance to strain at 10% deformation [N/mm ²]	0.011	0.018	0.026	0.046	0.073	0.130	0.170	0.270	0.370	0.590	0.930	1.340	1.840												
Residual compression set [%]	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 6	< 7	< 9	< 9	< 8	DIN ISO 1856											
Tensile strength [N/mm ²]	> 0.35	> 0.40	> 0.45	> 0.55	> 0.70	> 0.95	> 1.25	> 1.65	> 2.25	> 3.00	> 3.80	> 4.40	> 5.00	DIN 53455-6-4											
Elongation at break [%]	> 400	> 400	> 400	> 400	> 400	> 400	> 400	> 400	> 400	> 400	> 400	> 400	> 400	DIN 53455-6-4											
Rebound elasticity [%]	50	50	50	50	50	50	50	50	50	50	50	50	50	DIN EN ISO 8307											
Specific volume resistance [Ω·cm]	> 10 ¹²	> 10 ¹²	> 10 ¹¹	> 10 ¹¹	> 10 ¹¹	> 10 ¹¹	> 10 ¹¹	> 10 ¹¹	> 10 ¹¹	> 10 ¹¹	> 10 ¹¹	> 10 ¹¹	> 10 ¹¹	DIN IEC 93											
Thermal conductivity [W/m·K]	0.05	0.05	0.06	0.07	0.07	0.08	0.08	0.08	0.10	0.10	0.11	0.11	0.11	DIN 52612-1											
Operating temperature [°C]	- 30 to + 70																								
Temperature peak [°C]	+ 120																								
Inflammability	Class E / EN 13501-1																						EN ISO 11925-1		

^[1] Values apply to form factor q = 3

^[2] Measured at maximum limit of static application range

^[3] Test according to respective standards

All information and data is based on our current knowledge. The data are subject to typical manufacturing tolerances and are not guaranteed. We reserve the right to amend the data.

Product overview

- motor bearer
- foundation decoupling
- sound insulation in floors and ceilings
- vibration decoupling of components
- machine frame foundation
- elastical intermediate bearer
- wall decoupling
- spring elements
- plates and cuttings for individuell processing
- underwater installations
- shaft decoupling

DIEPOLAST DYN S

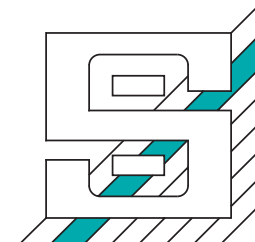
Properties	S 75	S 150	S 350	S 750	S 1500	Test method
Colour	yellow	green	blue	red	orange	
Static loads [N/mm ²] ^[1]	0.075	0.150	0.350	0.750	1.500	
Dynamic loads [N/mm ²] ^[1]	0.120	0.250	0.500	1.200	2.000	
Load peaks [N/mm ²] ^[1]	2.0	3.0	4.0	6.0	8.0	
Mechanical loss factor ^[2]	0.06	0.03	0.03	0.04	0.05	DIN 53513 ^[3]
Static E-modulus [N/mm ²] ^[2]	0.63	1.25	2.53	5.21	9.21	DIN 53513 ^[3]
Dynamic E-modulus [N/mm ²] ^[2]	0.92	1.65	3.25	8.88	16.66	DIN 53513 ^[3]
Static shear modulus [N/mm ²] ^[2]	0.16	0.22	0.35	0.80	1.15	DIN 53513 ^[3]
Dynamic shear modulus [N/mm ²] ^[2]	0.27	0.35	0.52	1.22	1.69	DIN 53513 ^[3]
Resistance to strain at 10% deformation [N/mm ²]	0.083	0.16	0.32	0.59	0.94	
Residual compression set [%]	< 5	< 5	< 5	< 6	< 8	DIN ISO 1856
Tensile strength [N/mm ²]	> 1.5	> 2.0	> 3.5	> 5.0	> 7.0	DIN 53455-6-4
Elongation at break [%]	> 500	> 500	> 500	> 500	> 500	DIN 53455-6-4
Tear resistance [N/mm]	> 1.6	> 2.1	> 2.5	> 4.3	> 5.6	DIN ISO 34-1/A
Rebound elasticity [%]	70	70	70	70	70	DIN EN ISO 8307
Specific volume resistance [Ω·cm]	> 10 ¹¹	> 10 ¹¹	> 10 ¹¹	> 10 ¹¹	> 10 ¹¹	DIN IEC 93
Thermal conductivity [W/m·K]	0.06	0.075	0.09	0.10	0.11	DIN 52612-1
Operating temperature [°C]	- 30 up to + 70					
Temperature peak [°C]	+ 120					
Inflammability	Class E / EN 13501-1					EN ISO 11925-1

^[1] Values apply to form factor q = 3

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