



P+S Polyurethan-Elastomere
GmbH & Co. KG

Diepolast

Insulation against sound and vibration

Ideal for vibration isolation

Diepolast®

Diepolast® offers a wide range of solutions for vibration isolation and sound damping in demanding environments. Available in mixed-cell and closed-cell standard grades for high loads, Diepolast offers customised application options in engine mountings, as machine feet, elastic interlayers, and sound insulation

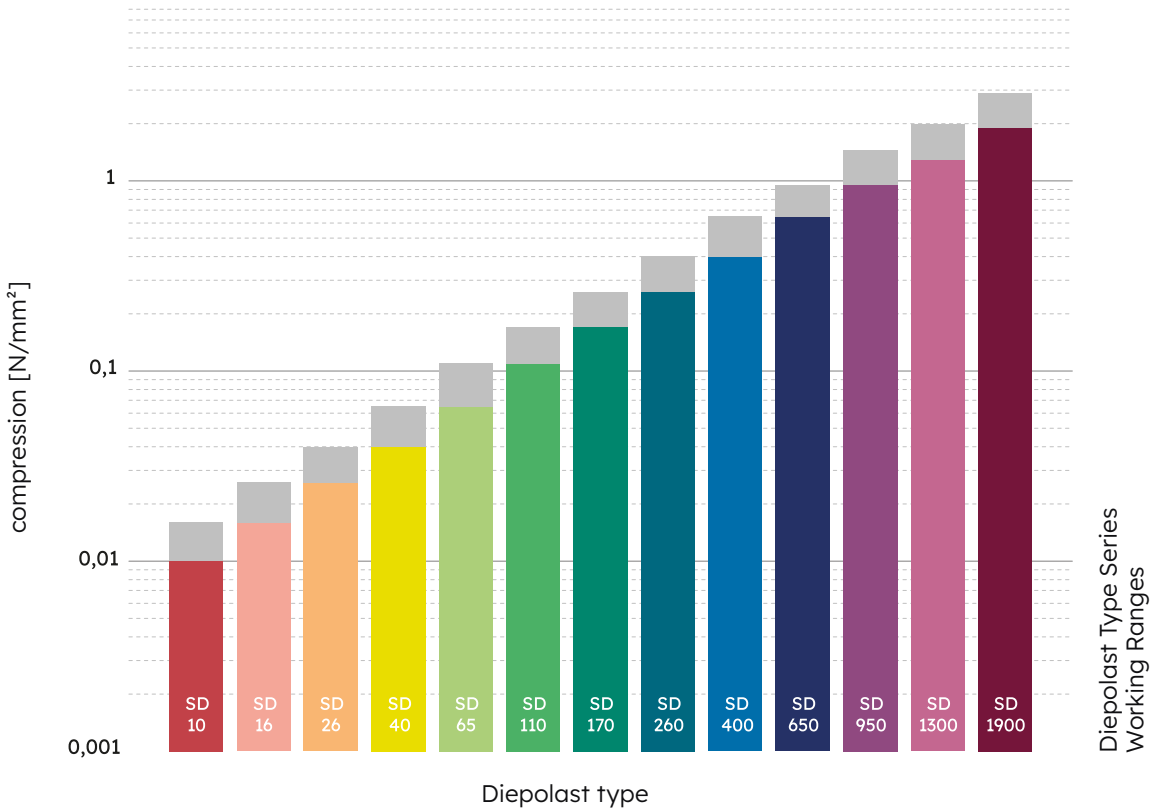
in floors and ceilings. Its unique cell structure prevents the absorption of liquid even under water, making it particularly suitable for use in difficult conditions.

Diepolast property profile

- Large load ranges
- Good vibration damping and isolation
- Applicable to compression and shear
- Good hydrolysis resistance
- Temperature range from -30°C to +70°C
- Low settlement
- Good decoupling properties
- Can be used to isolate the source or the receiver
- Good resistance to many chemicals and oils

Application-specific products

- Engine mounts, machine feet, elastic interlayers
- Sound insulation in floors and ceilings
- Buffers and decoupling elements



Diepolast SD

Properties	SD 10	SD 16	SD 26	SD 40	SD 65	SD 110	SD 170	SD 260	SD 400	SD 650	SD 950	SD 1300	SD 1900	Test method
Colour	red	pink	orange	yellow	bright green	green	dark green	petrol	blue	dark blue	dark violet	violet	bordeaux red	
Static loads [N/mm²] ⁽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/mm²] ⁽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/mm²] ⁽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/mm²] ⁽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/mm²] ⁽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/mm²]	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/mm²]	> 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 the upper limit of the static operating range
(3) Test procedure based on the specified standard

All information is based on our current knowledge. It is subject to normal manufacturing tolerances and does not constitute guaranteed properties. Subject to change without notice.

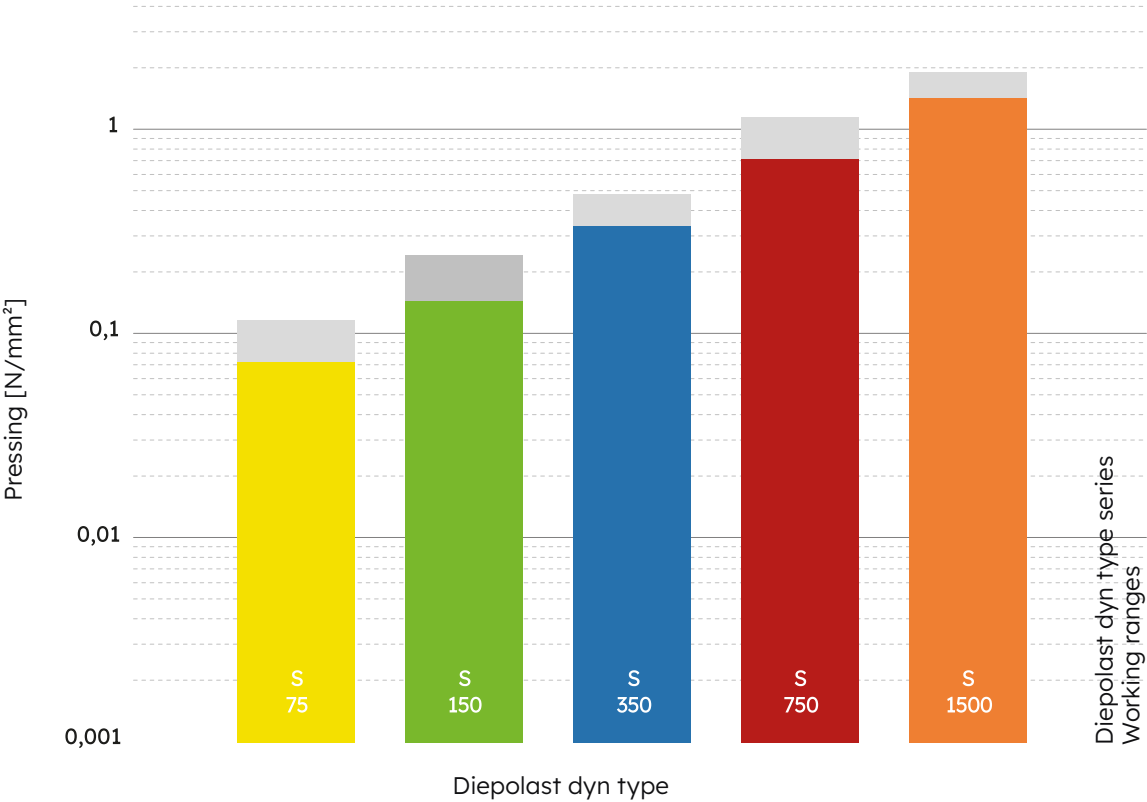
Diepolast dyn

Diepolast dyn is a closed-cell high-tech elastomer made from a special polyether urethane. Thanks to its structure, this material absorbs virtually no liquids and can therefore also be used in pressurised ground-water.

Five basic types are available: Diepolast dyn S 75 - S 1500, which offer a solution for almost every application. The desired requirements can be met by selecting the appropriate type, contact surface and construction height.

Areas of application for Diepolast

- Construction
 - Mechanical engineering
 - Transport and conveyor technology
 - Civil engineering
 - Elevator technology
- Sanitary engineering
 - Heating, air conditioning and ventilation
 - Medical technology
 - Prefabricated house construction



Diepolast dyn is also suitable for highly demanding applications due to its excellent dynamic properties. Our product range offers special types for heavy-duty bearings and dynamic loads up to 9N/mm2 (load peaks even up to 18N/mm2). These types are called Diepolast dyn HL and are available on request.

Diepolast dyn S

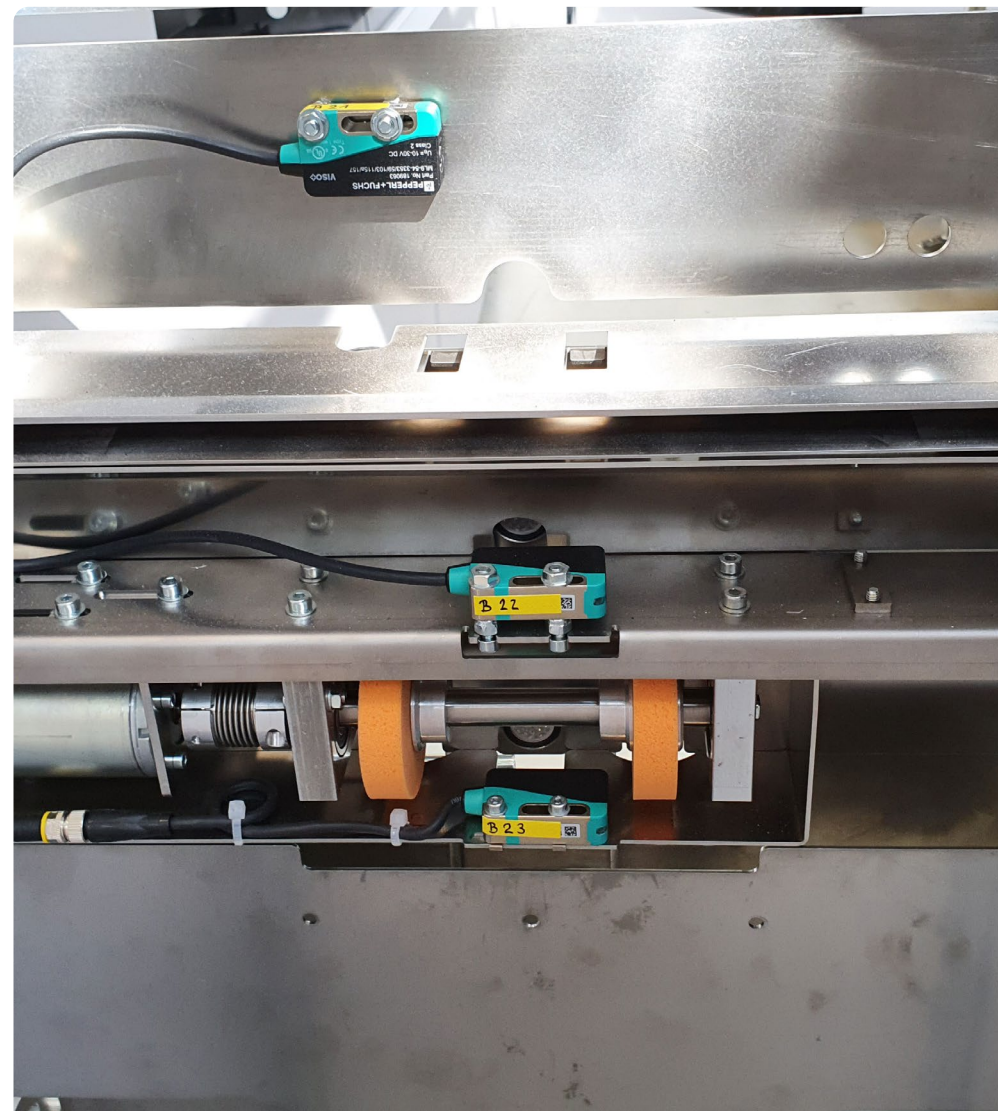
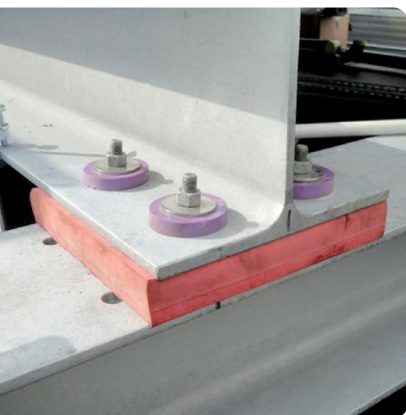
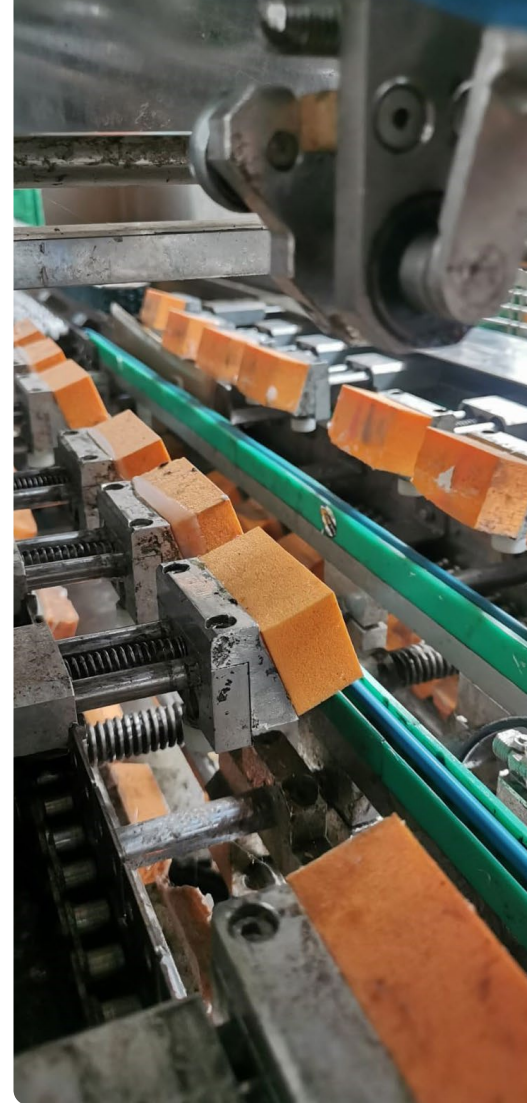
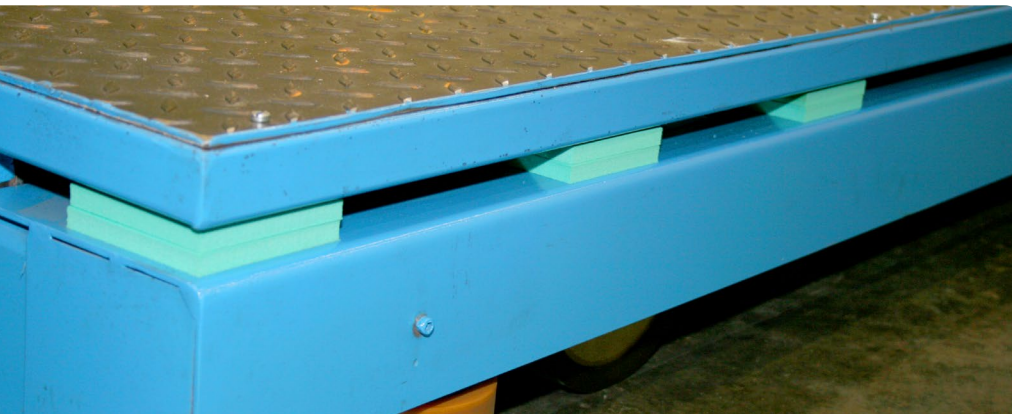
Properties	S 75	S 150	S 350	S 750	S 1500	Test method
Colour	yellow	green	blue	red	orange	
Static loads [N/mm²] ⁽¹⁾	0.075	0.150	0.350	0.750	1.500	
Dynamic loads [N/mm²] ⁽¹⁾	0.120	0.250	0.500	1.200	2.000	
Load peaks [N/mm²] ⁽¹⁾	2.0	3.0	4.0	6.0	8.0	
Mechanical loss factor ⁽²⁾	0.06	0.03	0.03	0.04	0.05	DIN 53513 ⁽³⁾
Static E-modulus [N/mm²] ⁽²⁾	0.63	1.25	2.53	5.21	9.21	DIN 53513 ⁽³⁾
Dynamic E-modulus [N/mm²] ⁽²⁾	0.92	1.65	3.25	8.88	16.66	DIN 53513 ⁽³⁾
Static shear modulus [N/mm²] ⁽²⁾	0.16	0.22	0.35	0.80	1.15	DIN 53513 ⁽³⁾
Dynamic shear modulus [N/mm²] ⁽²⁾	0.27	0.35	0.52	1.22	1.69	DIN 53513 ⁽³⁾
Resistance to strain at 10% deformation [N/mm²]	0.083	0.16	0.32	0.59	0.94	
Residual compression set [%]	< 5	< 5	< 5	< 6	< 8	DIN ISO 1856
Tensile strength [N/mm²]	> 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

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Application examples for Diepolast at a glance

- Engine mounting
- Building mounting
- Sound insulation in floors and ceilings
- Machine frame decoupling
- Machine base mounting
- Elastic intermediate layers
- Wall mounting
- Spring elements
- Plates and cut-to-size pieces for individual further processing
- Underwater mounting
- Shaft insulation





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