ISOLDYN® - 350

Blue

Static load: up to N/mm²
0.350
Dynamic load: up to N/mm²
0.500
Load peaks: up to N/mm²
4.000

ISOLDYN® - 350 Polyurethane foam mats

Closed cellular polyether-urethane mats for structure-borne sound insulation and vibration protection

Specification

- Does not absorb water
- Low natural frequency
- High insulating effect with shocks / vibrations
- Low dynamic stiffening factor
- Constant characteristic values over a long service life
- Resistant to concrete grouts, oils, diluted acids and alkalis

Product- / Logistics data			
Thickness mm	6, 12.5 and 25	Stockholding	Store in a dry place, do not expose to direct sunlight
Length x width mm	1'000 x 500	Storage period	Unlimited with correct storage

Technical data				
Size	Unit	Value	Test method	Comment
Mechanical loss factor		0.03	DIN 53513*	Guid value
Static E-modulus	N/mm²	2.530	DIN 53513*	Compression: 0.350 N/mm²
Dynamic shear modulus at 10 Hz	N/mm²	3.250	DIN 53513*	Compression: 0.350 N/mm²
Rebound elasticity	%	70	DIN EN ISO 8307	+/- 10 %
Residual compression set	%	< 5	DIN EN ISO 1856	50 %, + 23 °C, 70 h 30 min after unloading
Thermal conductivity	W/(m·k)	0.090	DIN 52612-1	
Specific volume resistance	Ω·cm	> 10^{11}	DIN IEC 93	Dry
Coefficient of friction with steel μ_s		0.5		Dry
Coefficient of friction with concrete μ_s		0.7		Dry
Inflammability		E	EN 13501-1	Normal flammable
Long-term temperature resistance	°C	Long-term: -30 to +70 Short-term: to +120		

* Measurement based on the corresponding standard.

Installation	
Surface	Avoid direct contact between ISOLDYN® mats and materials containing plasticiser (use a release layer). Requirements storage area: Load capacity > dynamic load. No loose parts. Power troweled. Free from teeth and gravel nets. Flatness under 2-m-lath ≤ 10 mm, > 10 mm re-profiling. Clean swept (Standard SIA-271:2007)
Installation	The connection points are fully pushed. Before applying the concrete, the ISOLDYN® mats are protected with a 2-ply tough PE foil (0.2 mm) and the overlap trapped to avoid cement contamination.
Screed requirement	Concrete or underlay flooring with flowable consistency as well as aerated concrete are only suitable to a limited extent and require additional, special sealing measures.
Processing instructions	The installation of ISOLDYN® mats should only be carried out by trained personnel. When using auxiliary products, e.g. adhesives, the ambient temperature and humidity must meet the requirements of the auxiliary products used. The corresponding product data sheets are to be considered.
Water	ISOLDYN® mats do not absorb moisture. As a result, the full structure-borne sound insulation is maintained even when in contact with water the shell construction phase and in the final state.

Safety- and Health instructions	
Safety note	The local safty requirements must be considered
Transportation	The ISOLDYN® mats are not classified as "endangered products".
Disposal	Waste code according to European Waste Cataloge Ordinance: 07 02 13. Local requirements must be considered.

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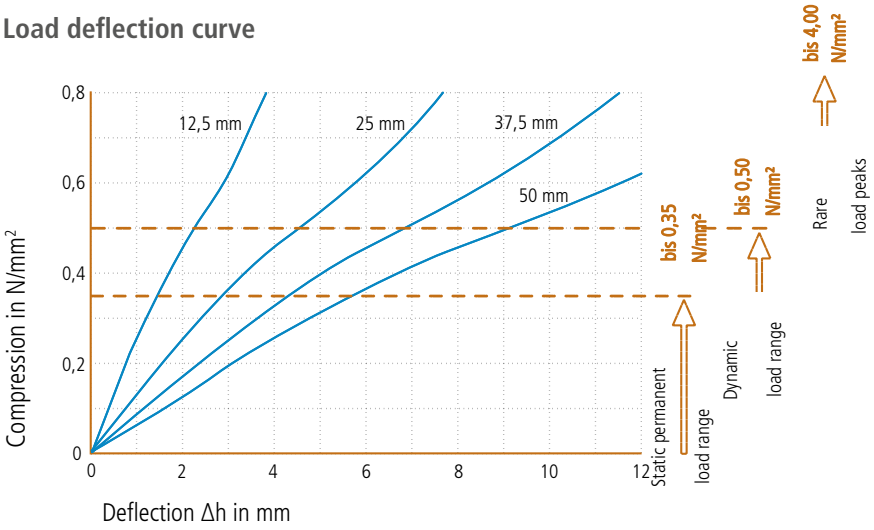
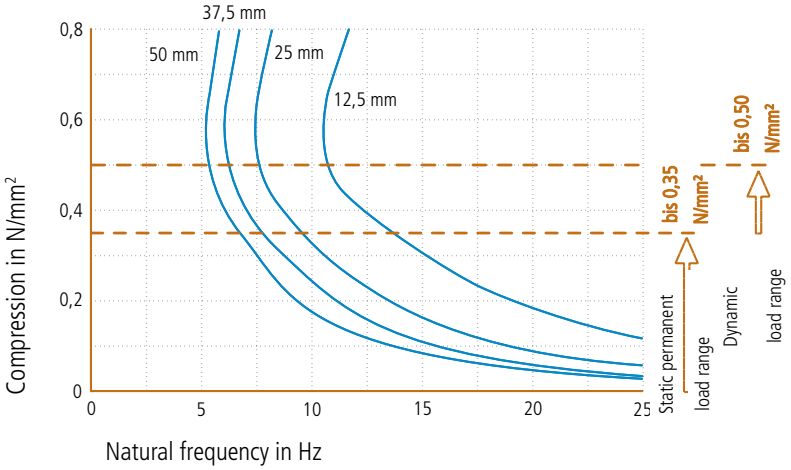
Important physical properties for dimensioning

Load deflection curve



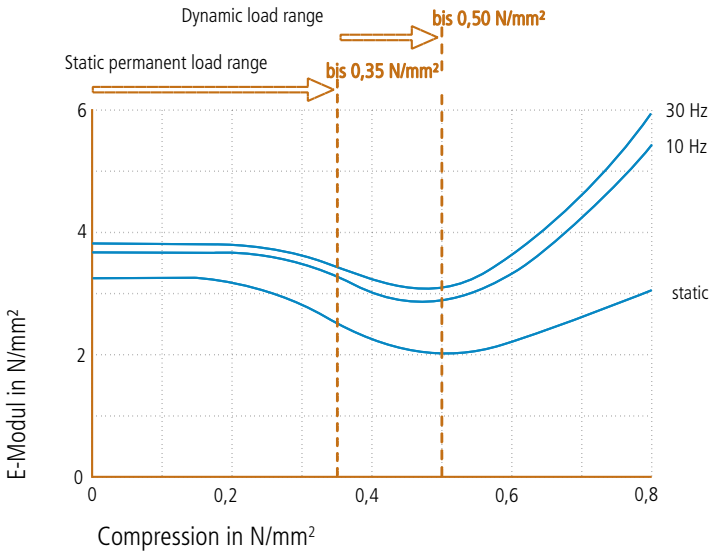
Spring characteristic curve.
Test speed v = 1 % of thickness.
Test at room temperature between flat steel plates.
Recording of the 3rd load.
Form factor q = 3.

Natural frequency



Natural frequency of a system consisting of a rigid mass and a layer of ISOLDYN® on a rigid base.
Form factor q = 3.

Modulus of elasticity



Load dependence of the static and dynamic moduli of elasticity.
Dynamic E-modulus: harmonic excitation with an amplitude of ± 0.11 mm at 10 Hz and ± 0.04 mm at 30 Hz.
Static E-modulus: tangent modulus from the spring characteristic.
Measurement according to DIN 53513.
Form factor q = 3.

All informations and datas are based on our current knowledge and can be used as calculation or guideline values. These are dependent on manufacturing tolerances and do not constitute guaranteed properties. Changes reserved. Further technical information can be found on our website www.hbt-isol.com.