

# ISOLDYN® - 50

Purple

Static load: up to N/mm<sup>2</sup>**0.050**Dynamic load: up to N/mm<sup>2</sup>**0.075**Load peaks: up to N/mm<sup>2</sup>**1.300**

## ISOLDYN® - 50 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	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		0.09	DIN 53513*	Guid value
Static E-modulus	N/mm <sup>2</sup>	0.322	DIN 53513*	Compression: 0.050 N/mm <sup>2</sup>
Dynamic shear modulus at 10 Hz	N/mm <sup>2</sup>	0.707	DIN 53513*	Compression: 0.050 N/mm <sup>2</sup>
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)	0.06	DIN 52612-1	
Specific volume resistance	Ω·cm	> 10 <sup>11</sup>	DIN IEC 93	Dry
Coefficient of friction with steel μ <sub>s</sub>		0.5		Dry
Coefficient of friction with concrete μ <sub>s</sub>		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.

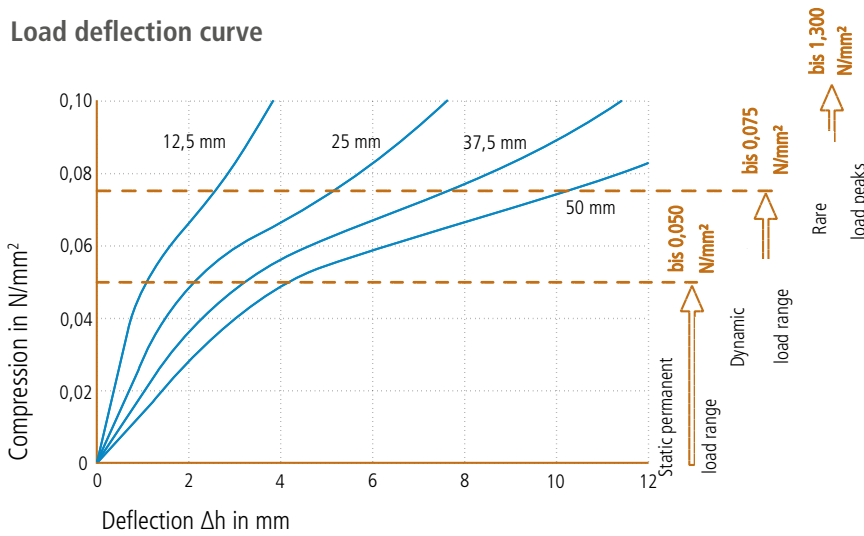
### Safety- and Health instructions

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

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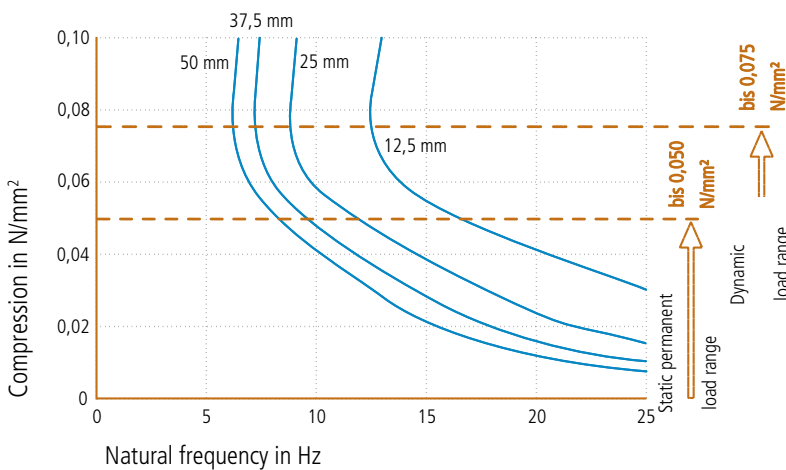
## Important physical properties for dimensioning

### Load deflection curve



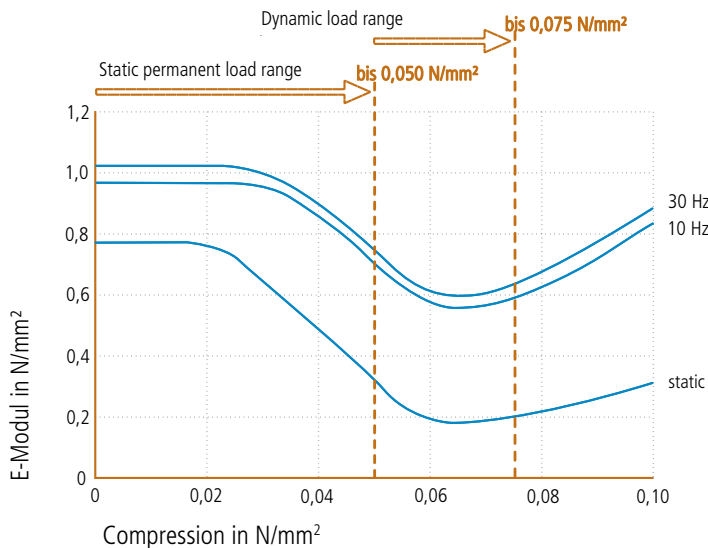
Spring characteristic curve.  
 Test speed  $v = 1\%$  of thickness.  
 Test at room temperature between flat steel plates.  
 Recording of the 3rd load.  
 Form factor  $q = 3$ .

### 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  $\pm 0.11$  mm at 10 Hz and  $\pm 0.04$  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](http://www.hbt-isol.com).