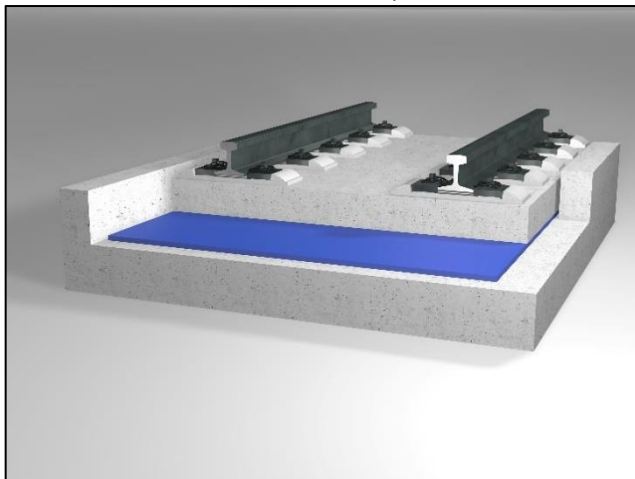


PURASYS MSS P 2025 Isolation and protection mat



PURASYS MSS P 2025 is an isolation and protection mat for railway track constructions, proofed in accordance to DIN 45673-7. The mat reduces structure borne sound and secondary airborne sound as well as emissions by vibrations. The field of application is in slab track systems (mass-spring-systems).

The MSS P 2025 has been fully tested according to DIN 45673-7 at the TU Munich.

Characteristic values of the product:

Static load up to:

0.023 N/mm²

Dynamic load up to:

0.035 N/mm²

Load peaks up to:

1.0 N/mm²

Values depending on form factor and apply to form factor q = 3

Material: Mixed cell virgin polyurethane
Colour: blue

Delivery specifications

Thickness: 25 mm
Length: 2000 mm
Width: 1000 mm
Mass: approx. 5,1 kg/m²

Tolerances in accordance with DIN ISO 3302-1 M4.

Properties	Values	Test method	Comment
Mechanical loss factor [C _{dyn.2}]	0.24	DIN 45673-7*	Reference Value depends on frequency, preload and amplitude
Static shear modulus	0.08 N/mm ²	DIN 53513*	
Dynamic shear modulus	0.13 N/mm ²	DIN 53513*	
Tensile strength	0.41 N/mm ²	ISO 527*	minimum
Elongation at break	>150 %	ISO 527*	minimum
Residual compression set	<5 %	DIN EN ISO 1856	50 %, 23 °C, 72 h, 30 min after unloading
Rebound elasticity	50 %	DIN EN ISO 8307	± 10 %
Mechanical fatigue resistance	<10 %	DIN 45673-7	Change of the static bedding modulus (C _{stat.2}) after 3 million load changes
Resistance to ageing	0 %	DIN 45673-7	Change of the static bedding modulus(C _{stat.2})
Freeze-Thaw resistance (5-30 Hz)	5 %	DIN 45673-7	Change of the dynamic bedding modulus (C _{dyn.2})
Specific volume resistance	>10 ¹¹ Ω·cm	DIN IEC 93	dry

All values were determined with a sample of form factor 3

(*) Measured values Kraiburg PuraSys in accordance with the respective standard

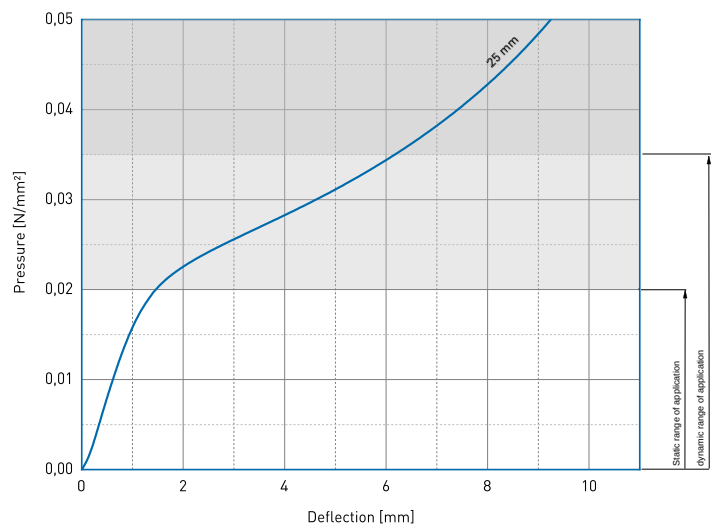
All information and data is based on our current knowledge. The data are subject to typical manufacturing tolerances and are not guaranteed. We reserve the right to amend the data.

Properties	Values	Test method	Comment
Thermal conductivity	0.06 W/[m·K]	DIN 52612-1	
Operating temperature	-30 to +70 °C		
Temperature peak	+120 °C		
Flammability	Class B2	DIN 4102-1	normal flammable
Ozone resistance	Free from cracks	DIN ISO 23529-23/50	

All values were determined with a sample of form factor 3

(*) Measured values Kraiburg PuraSys in accordance with the respective standard

Load deflection curve*



Static bedding modulus measured according to DIN 45673 between σ_1 and σ_2 :

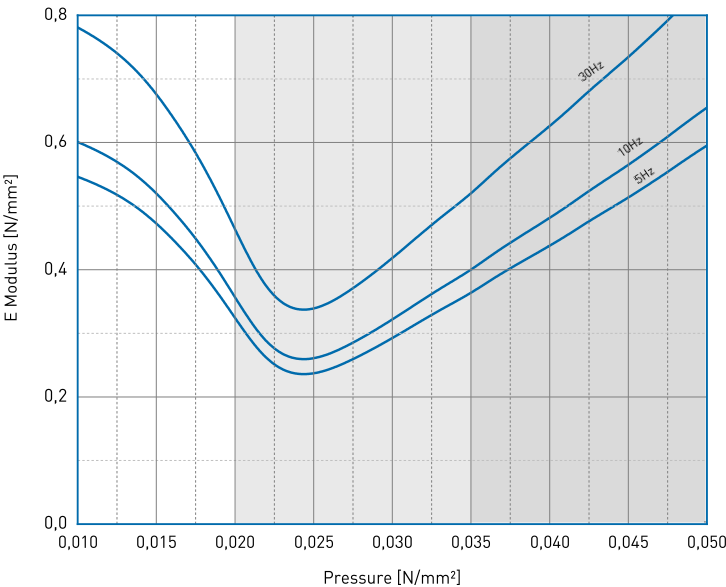
σ_1	σ_2	C_{stat}	Comment
0.0025 N/mm ²	0.010 N/mm ²	0.019 N/mm ³	±20 %
0.0050 N/mm ²	0.015 N/mm ²	0.017 N/mm ³	
0.0110 N/mm ²	0.020 N/mm ²	0.012 N/mm ³	
0.0100 N/mm ²	0.040 N/mm ²	0.004 N/mm ³	

The static bedding modulus must be determined project-specifically as secant stiffness according to DIN 45673-7. It has to be declared subdivided in different analysis areas. If the project-specific loads (dead load and load of vehicle) are known the bedding modulus can be determined with the load deflection curve. At other thicknesses load deflection curves can be interpolated linearly.

Material with a thickness <20 mm can only be purchased as split material.

Modulus of elasticity*

Dynamic test: harmonic excitation as a function of pressure. Test according to DIN 45673-7 with an amplitude of 7 mm/s.
Quasistatic modulus of elasticity: tangent modulus taken from the load deflection curve.



C_{dyn} according to DIN 45673

Static preload	Frequency	C _{dyn}
0.020N/mm²	5 Hz	0.013 N/mm³
	10 Hz	0.014 N/mm³
	20 Hz	0.016 N/mm³
	30 Hz	0.019 N/mm³

Static preload	Frequency	C _{dyn}
0.025N/mm²	5 Hz	0.009 N/mm³
	10 Hz	0.010 N/mm³
	20 Hz	0.012 N/mm³
	30 Hz	0.013 N/mm³

Static preload	Frequency	C _{dyn}
0.030N/mm²	5 Hz	0.011 N/mm³
	10 Hz	0.013 N/mm³
	20 Hz	0.015 N/mm³
	30 Hz	0.017 N/mm³

(All values are subject to tolerance fluctuations of up to 20 %.)

(*) Measured values Kraiburg PuraSys in accordance with the respective standard

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