

Technical Data Sheet

Durostone[®] UPM S13 LST

Typical characteristics

- SMC high-pressure laminate
- Special polyester (UP) resin matrix reinforced with an e-glass roving mat
- High mechanical & dielectric strength and low flammability

Typical industries

- Rail Technology and Vehicles

	Test method	Unit	Guideline value
Mechanical properties			
Density	ISO 1183	g / cm ³	2,1
Flexural strength [⊥]	ISO 178	MPa	160
Modulus of elasticity in flexion [⊥]	ISO 178	MPa	14000
Compressive strength [⊥]	ISO 604	MPa	280
Compressive strength II	ISO 604	MPa	180
Tensile strength II	ISO 527	MPa	80
Impact strength II (Charpy)	ISO 179	kJ / m ²	100
Shear strength [⊥]	BS 2782/340B	MPa	85
Shear strength II	BS 2782/340B	MPa	80
Delamination force II	DIN 53463	N	2000
Thermal properties			
Flammability	UL 94	/	VO / 1mm
Smoke density & toxicity, class	NF F 16-101	/	F0
Surface flame propagation, class	NF P 92-501	/	M1
Surface burning characteristics of building materials, FSI	ASTM E84-05	/	20
Surface burning characteristics of building materials, SDI	ASTM E84-05	/	40
Lateral spread of flame, CFE	ISO 5658-2	kW/m ²	34
Smoke generation optical density, D _{s(4)}	EN ISO 5659-2	/	79
Smoke generation optical density, VOF ₄	EN ISO 5659-2	/	99



	Test method	Unit	Guideline value
Smoke generation optical density, D_{st} max.	EN ISO 5659-2	/	158
Smoke generation optical density, CIT_G	EN ISO 5659-2	/	0,04
Heat release smoke production and mass loss rate, MAHRE	ISO 5660-1	kW/m ²	31,12
Glow-wire flammability test	EN 60695-2-11	°C	960
Coefficient of linear expansion II	TMA (Mettler)	10 ⁻⁶ x K ⁻¹	≈ 20
Fire propagation index, I	BS 476: Part 6	/	7,3
Fire propagation subindex, i_1	BS 476: Part 6	/	0,1
Fire propagation subindex, i_2	BS 476: Part 6	/	4,2
Fire propagation subindex, i_3	BS 476: Part 6	/	3,0
Surface spread of flame	BS 476: Part 7	/	Class 1
Physical properties			
Water absorption (method I)	ISO 62	%	0,1
Dielectrical properties			
Electric strength 90°C under oil \perp	IEC 60243	kV / mm	13
Electric strength 90°C under oil II	IEC 60243	kV/25mm	75
Specific surface resistance	IEC 60093	Ohm	10 ¹⁴
Specific volume resistance	IEC 60093	Ω x cm	10 ¹³
Comparative tracking index (test solution B)	IEC 60112	CTI	600 M

= perpendicular to the lamination II = parallel to the lamination

The data stated above are average values verified on the basis of regular statistical tests and controls. All information in this publication is based on current technical knowledge and experience. Due to the large number of possible influences during processing and application, it does not exempt the user/processor from carrying out their own tests and trials. Responsibility for the evaluation of the end product for the intended use and compliance with the applicable relevant legal requirements lies exclusively with the user/processor as well as the distributor of the respective product/end product. Suggested uses do not constitute an assurance of suitability for the recommended purpose. The information in this publication and our declarations in Connection with this publication do not constitute acceptance of a guaranteed or warranted characteristic. Guarantee declarations require our separate express written declaration in order to be effective. We reserve the right to adapt the product to technical progress and new developments. The products described in this publication are only sold to customers with the appropriate expertise and not to consumers. Please do not hesitate to contact us if you have any questions or if you experience any specific application problems. If the application for which our products are used is subject to an official approval requirement, the user/processor is responsible for obtaining these approvals. Our application recommendations do not exempt the user/processor from the obligation to examine and, if necessary, clarify the possibility of infringements of third-party rights. In all other respects, we refer to our General Terms and Conditions (GTC). These are available at: www.roechling-industrial.com/gtc

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