

Technical Data Sheet

Durolight® S3

Typical characteristics

- Low thermal conductivity
- High mechanical strength
- Glass-reinforced thermoset SMC high-pressure laminate developed for applications at cryogenic temperatures

Typical industries

- Impianti di propulsione a LNG
– isolamento criogenico
- Oleodotti
- Subsea
- Healthcare

	Test method	Unit	Guideline value
Mechanical properties			
Density	ISO 1183	g / cm ³	1,85
Flexural strength $\perp$ RT	ISO 178	MPa	350
Flexural strength $\perp$ -196°C	ISO 178	MPa	500
Modulus of elasticity in flexion $\perp$ RT	ISO 178	MPa	17000
Modulus of elasticity in flexion $\perp$ -196°C	ISO 178	MPa	20000
Compressive strength $\perp$ RT	ISO 604	MPa	450
Compressive strength II RT	ISO 604	MPa	300
Compressive strength II -196°C	ISO 604	MPa	350
Compressive strength $\perp$ -196°C	ISO 604	MPa	550
Tensile strength II RT	ISO 527	MPa	280
Tensile strength II -196°C	ISO 527	MPa	360
Impact strength II (Charpy)	ISO 179	kJ / m ²	90
Thermal properties			
Thermal conductivity $\perp$		W / (m * K)	≈ 0,3
Coefficient of linear expansion $\perp$	TMA (Mettler)	10 ⁻⁶ x K ⁻¹	≈ 65
Coefficient of linear expansion II	TMA (Mettler)	10 ⁻⁶ x K ⁻¹	≈ 13
Operating temperature		°C	-196 to +180
Physical properties			
Water absorption (method I)	ISO 62	%	< 0,1

$\perp$ = perpendicular to the lamination II = parallel to the lamination

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