

### Technical Data Sheet

## Durolight® S3

GFK-EP

#### Typical characteristics

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

#### Typical industries

- LNG engines - Cryogenic Insulation
- Pipelines
- Subsea
- Healthcare

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

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

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