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 发动机 - 低温隔热件
- 管路
- 水下
- Healthcare

	Test method	Unit	Guideline value
Mechanical properties			
Density	ISO 1183	g / cm^3	1,85
Flexural strength ⊥ RT	ISO 178	MPa	350
Flexural strength ⊥ -196°C	ISO 178	MPa	500
Modulus of elasticity in flexion ⊥ RT	ISO 178	MPa	17000
Modulus of elasticity in flexion ⊥ -196°C	ISO 178	MPa	20000
Compressive strength ⊥ RT	ISO 604	MPa	450
Compressive strength II RT	ISO 604	MPa	300
Compressive strength II -196°C	ISO 604	MPa	350
Compressive strength ⊥ -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 ⊥		W / (m * K)	≈ 0,3
Coefficient of linear expansion ⊥	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 1)	ISO 62	%	< 0,1

ri-inquiry@roechling.com • www.roechling.com/industrial/materials

Print: 01/05/2025 • Release: 20/09/2023
PIM-Version: 739 • PIM-ID: 716659 • PIM-Code: 739-39-12.23.9-3.5.5.9-13
Company-IDs: 20000-1

⊥ = 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