

## Technical Data Sheet

# Durolight<sup>®</sup> S

### 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
- Hydrogen Energy

	Test method	Unit	Guideline value
<b>Mechanical properties</b>			
Density	ISO 1183	g / cm <sup>3</sup>	1,85
Flexural strength $\perp$ 0°C	ISO 178	MPa	140
Flexural strength $\perp$ +50°C	ISO 178	MPa	125
Flexural strength $\perp$ +100°C	ISO 178	MPa	110
Flexural strength $\perp$ +150°C	ISO 178	MPa	80
Flexural strength $\perp$ -50°C	ISO 178	MPa	160
Flexural strength $\perp$ -100°C	ISO 178	MPa	175
Flexural strength $\perp$ -150°C	ISO 178	MPa	190 <sup>1)</sup>
Flexural strength $\perp$ -196°C	ISO 178	MPa	205 <sup>1)</sup>
Modulus of elasticity in flexion $\perp$ 0°C	ISO 178	MPa	9000
Compressive strength $\perp$ 0°C	ISO 604	MPa	250
Compressive strength $\perp$ +50°C	ISO 604	MPa	220
Compressive strength $\perp$ +100°C	ISO 604	MPa	190
Compressive strength $\perp$ +150°C	ISO 604	MPa	160
Compressive strength $\perp$ -50°C	ISO 604	MPa	280
Compressive strength $\perp$ -100°C	ISO 604	MPa	310
Compressive strength $\perp$ -150°C	ISO 604	MPa	335 <sup>1)</sup>
Compressive strength $\perp$ -196°C	ISO 604	MPa	360 <sup>1)</sup>
Tensile strength II 0°C	ISO 527	MPa	75
Impact strength $\perp$ (Charpy) RT	ISO 179	kJ / m <sup>2</sup>	75

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	Test method	Unit	Guideline value
Shear strength II RT	DIN EN 60893	MPa	20
<b>Thermal properties</b>			
Flammability	UL 94	/	V0 / 3mm
Smoke density & toxicity, class	NF F 16-101	/	F0
Fire test, class	NF P 92-501	/	M1
Thermal conductivity $\perp$ RT		W / (m * K)	$\approx 0,3$ <sup>1) 2)</sup>
Thermal conductivity $\perp$ -50°C		W / (m * K)	$\approx 0,27$ <sup>1) 2)</sup>
Thermal conductivity $\perp$ -196		W / (m * K)	$\approx 0,21$ <sup>1) 2)</sup>
<b>Physical properties</b>			
Water absorption (4mm thickness)	ISO 62	%	0,2

$\perp$  = 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](http://www.roechling-industrial.com/gtc)

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Print: 25/05/2026 • Release: 17/10/2024 • Version: 5.0  
 PIM-ID: 716649 • PIM-Code: 864-38-12.23.9-3.5.5.27.11-24  
 Company-IDs: 20000-1

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