

## Material properties–LUNA15GR(P)

Compressive Strength	Flatwise	N/mm <sup>2</sup>	127	ISO604:2002
	Edgewise	N/mm <sup>2</sup>	310	
Compressive Modulus	Flatwise	N/mm <sup>2</sup>	–	
Compressive Strength	@30days in 20°C sea water	N/mm <sup>2</sup>	260	
Compressive Strength	@Heating up to 50°C	N/mm <sup>2</sup>	260.0	
Tensile Strength		N/mm <sup>2</sup>	60	ISO 527–4:1997
Apparent Interlaminar Shear Strength		N/mm <sup>2</sup>	80	ISO14130:2002
Charpy Impact strength ( notch type)		KJ/m <sup>2</sup>	33	ISO 179–2:1997 KS M 3015 : 2003
Friction		μ(min)	0.13	
Hardness (Rockwell M)		HRM	100	ISO2039–2 :1987
Thermal expansion	Flatwise	10 <sup>-6</sup> mm/°C	47	ASTM D 696
	Edgewise	10 <sup>-6</sup> mm/°C	256	
Swelling Data	after 30days in 20°C sea water	vol. %	0.13	IPASS–S.O.P
	after 30days in 80°C sea water	vol. %	2.59	
	after 30days in 20°C oil	vol. %	0.09	
	after 30days in 80°C oil	vol. %	1.38	
Wear & Friction @10N/mm <sup>2</sup> in wet condition	wear	%	1.33	IPASS–S.O.P
	Wall thickness change	%	2.26	
	Appearance	–	Not to find remarkable cracks and delamination	
	Coefficient of friction	–	0.16	
Wear & Friction @10N/mm <sup>2</sup> in dry condition	wear	%	0.09	IPASS–S.O.P
	Wall thickness change	%	0.21	
	Appearance	–	Not to find remarkable cracks and delamination	
	Coefficient of friction	–	0.05	

