

# MATERIAL DATASHEET

# Meldin® 5301 XIII

**Features:** *Beige, Proprietary custom PEEK, Grade qualified according to Norsok M710 rev3 up to 15% H2S*

**Benefits:** *Enhanced mechanical properties at cryogenic temperature, Excellent sealing capability, Low gas permeability*

*Working temperature range: from -200°C up to +260°C (+500°F)*

Properties	Test Methods	Typical Values	Units
<b>PHYSICAL</b>			
Specific Gravity	ASTM D792	1.36	--
Water Absorption, 24hr	ASTM D570	0.17	%
<b>MECHANICAL</b>			
Tensile Strength – RT / 249°C	ASTM D638	70 [10,200] / 10 [1,400]	MPa [psi]
Elongation-RT	ASTM D638	6.6	%
Tensile Modulus-RT	ASTM D638	3.2 [4.6]	GPa [psi x 10 <sup>5</sup> ]
Compressive Strength – RT / 200°C	ASTM D695	108 [15,700] / 16 [2,300]	MPa [psi]
Compressive Modulus-RT	ASTM D695	2.9 [4.2]	GPa [psi x 10 <sup>5</sup> ]
Flexural strength – RT / 249°C	ASTM D790	123 [26,400] / 8 [1,200]	MPa [psi]
Flexural Modulus-RT	ASTM D790	3.2 [4.6]	GPa [psi x 10 <sup>5</sup> ]
<b>THERMAL</b>			
Melting point	ASTM D3418	343 [650]	°C [°F]
Glass Transition Temperature	ASTM D3418	143 [290]	°C [°F]
Linear Coefficient of Thermal Expansion along flow, <Tg / >Ta	ASTM E831	NA	m/m/°C [in/in/°F] x 10 <sup>-5</sup>
Linear Coefficient of Thermal Expansion average, <Tg / > Ta	ASTM E831	NA	m/m/°C [in/in/°F] x 10 <sup>-5</sup>
Thermal conductivity	ASTM F433	NA	GPa [psi x 10 <sup>5</sup> ]
Heat deflection temperature	ASTM D648	NA	°C [°F]
<b>ELECTRICAL</b>			
Dielectric Strength (2.5 mm thick)	ASTM D149	NA	kV/m [V/mil]
Dielectric Constant-RT, 1kHz)	ASTM D150	NA	-
Volume Resistivity-RT	ASTM D257	NA	Ohm cm

The table above represents typical values, intended for reference only. They should NOT be used as a basis for design specifications or quality control. Meldin® is a registered trademark.  
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