

# MATERIAL DATASHEET

## Meldin® 5301: Types I-II-IV-VI-VII

**Features:** Beige, proprietary custom PEEK, grades qualified according to Norsok M710, rev3 up to 15% H<sub>2</sub>S (Types IV and VII up to 2%, Type VI up to 15%) – temperature class X

**Benefits:** Type VI-A is qualified to API 6A F1.13.5.2 sour immersion testing of materials in fluid HH at 200°C [392°F]

**Working Temperature Range:** -80° to +260°C [-112° to +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 [600]	°C [°F]
Glass Transition Temperature	ASTM D3418	143 [290]	°C [°F]
Linear Coefficient of Thermal Expansion along flow, <T <sub>g</sub> / >T <sub>g</sub>	ASTM E831	NA	m/m/°C [in/in/°F] x 10 <sup>-5</sup>
Linear Coefficient of Thermal Expansion average, <T <sub>g</sub> / >T <sub>g</sub>	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.

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