

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% H2S (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

Working Temperature Range: -80° to +260°C [-112° to +500°F]

Properties	Test Methods	Typical Values	Units
PHYSICAL			
Specific Gravity	ASTM D792	1.36	--
Water Absorption, 24hr	ASTM D570	0.17	%
MECHANICAL			
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 ⁵]
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 ⁵]
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 ⁵]
THERMAL			
Melting point	ASTM D3418	343 [600]	°C [°F]
Glass Transition Temperature	ASTM D3418	143 [290]	°C [°F]
Linear Coefficient of Thermal Expansion along flow, <Tg / >Tg	ASTM E831	NA	m/m/°C [in/in/°F] x 10 ⁻⁵
Linear Coefficient of Thermal Expansion average, <Tg / > Tg	ASTM E831	NA	m/m/°C [in/in/°F] x 10 ⁻⁵
Thermal conductivity	ASTM F433	NA	GPa [psi x 10 ⁵]
Heat deflection temperature	ASTM D648	NA	°C [°F]
ELECTRICAL			
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

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