

Material Specification: Kemlox-G K-181

<i>Physical Property</i>	<i>Value</i>
<i>Resin Content</i>	30% to 35%
<i>Density</i>	0.07 lb/in ³
<i>Rockwell Hardness¹, M scale</i>	115 – 117
<i>Izod Impact Resistance²(ft-lb/ inch of notch)</i>	12 – 15
<i>Volume Resistivity (Ω-cm)</i>	1.05 x 10 ¹³ - 1.26 x 10 ¹³
<i>Dielectric Constant³</i>	4.31 – 4.61
<i>Heat Deflection Temperature⁴</i>	>572°F [>300°C]
<i>Axial Coefficient of Thermal Expansion in./in. per °F</i>	5.6 x 10 ⁻⁶

Disclaimer

Data contained herein is based on tests conducted on representative samples, either from our own testing or from unconfirmed data supplied by resin or fabric manufacturers and falls within the normal range of product properties. However, this data should not be used to establish specification limits or used alone as a basis for design. Seller assumes no obligation or liability for any advice furnished by it or for the results obtained with respect to these products. All such advice is provided gratis and Buyer assumes sole responsibility for results obtained in reliance thereon. It is suggested that the purchaser conduct tests to determine if these materials are suited to their application. All specifications are subject to change without notice.

With E-Glass Reinforcement

<i>Mechanical Property</i>	<i>Value at 75°F</i>	<i>Value at 380°F</i>
<i>Tensile Strength (kPsi)</i>	65.7 – 71.8	18.7 – 22.5
<i>Tensile Modulus (psi)</i>	3.51 x 10 ⁶ – 4.34 x 10 ⁶	-
<i>Flexural Strength (kPsi)</i>	66.2 – 70.3	11.7 – 14.0
<i>Flexural Modulus (psi)</i>	2.5 x 10 ⁶ – 2.7 x 10 ⁶	4.24 x 10 ⁵ – 4.61 x 10 ⁵
<i>Compressive Strength (kPsi)</i>	52.5 – 56.0	12.2 – 24.8
<i>Compressive Modulus (psi)</i>	1.66 x 10 ⁶ – 1.71 x 10 ⁶	0.92 x 10 ⁶ – 1.37 x 10 ⁶
<i>Shear Strength (kPsi)</i>	13.6 – 14.1	-

With S-Glass Reinforcement

<i>Mechanical Property</i>	<i>Value at 75°F</i>	<i>Value at 380°F</i>
<i>Tensile Strength (kPsi)</i>	69.8 – 89.2	28.3 – 43.2
<i>Tensile Modulus (psi)</i>	3.88 x 10 ⁶ – 4.77 x 10 ⁶	-
<i>Flexural Strength (kPsi)</i>	73.2 – 85.3	7.7 – 45.3
<i>Flexural Modulus (psi)</i>	2.74 x 10 ⁶ – 2.84 x 10 ⁶	0.563 x 10 ⁶ – 2.34 x 10 ⁶
<i>Compressive Strength (kPsi)</i>	56.4 – 65.9	13.4 – 17.4
<i>Compressive Modulus (psi)</i>	0.93 x 10 ⁶ – 2.44 x 10 ⁶	1.09 x 10 ⁶ – 1.20 x 10 ⁶
<i>Shear Strength (kPsi)</i>	23.0 – 26.4	-

Keystone Engineering Company

6310 Sidney Street

P.O. Box 14666

Houston, TX 77221-4666

Tel: 713-747-1479

Fax: 713-747-8227

E-Mail: sales@keystoneeng.com

www.keystoneeng.com



¹ At room temperature

² At room temperature

³ Tested at 10 to 200 kHz

⁴ Tested at 264 psi loading

Material Specification: Kemlox HT-2 K-181

<i>Physical Property</i>	<i>Value</i>
<i>Resin Content</i>	30% – 35%
<i>Density</i>	0.07 lb/in ³
<i>Rockwell Hardness⁵, M scale</i>	106/110
<i>Izod Impact Resistance⁶ (ft-lb/ inch of notch)</i>	14 – 16
<i>Volume Resistivity (Ω-cm)</i>	1.67 x 10 ¹² – 6.32 x 10 ¹²
<i>Dielectric Constant⁷</i>	5.10 – 5.16
<i>Heat Deflection Temperature⁸</i>	>572°F [>300°C]
<i>Axial Coefficient of Thermal Expansion in./in. per °F</i>	5.6 x 10 ⁻⁶

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With E-Glass Reinforcement

<i>Mechanical Property</i>	<i>Value at 75°F</i>	<i>Value at 380°F</i>
<i>Tensile Strength (kPsi)</i>	55.3 – 65.2	43.6 – 47.0
<i>Tensile Modulus (psi)</i>	3.70 x 10 ⁶ – 4.52 x 10 ⁶	-
<i>Flexural Strength (kPsi)</i>	72.4 – 81.6	43.9 – 51.8
<i>Flexural Modulus (psi)</i>	2.7 x 10 ⁶ – 3.1 x 10 ⁶	1.90 x 10 ⁶ – 2.19 x 10 ⁶
<i>Compressive Strength (kPsi)</i>	56.9 – 71.2	40.9 – 47.2
<i>Compressive Modulus (psi)</i>	1.83 x 10 ⁶ – 1.93 x 10 ⁶	1.68 x 10 ⁶ – 1.74 x 10 ⁶
<i>Shear Strength (kPsi)</i>	16.0 – 16.7	-

With S-Glass Reinforcement

<i>Mechanical Property</i>	<i>Value at 75°F</i>	<i>Value at 380°F</i>
<i>Tensile Strength (kPsi)</i>	79.1 – 98.1	55.3 – 57.6
<i>Tensile Modulus (psi)</i>	3.95 x 10 ⁶ – 4.81 x 10 ⁶	-
<i>Flexural Strength (kPsi)</i>	86.6 – 91.4	57.2 – 63.0
<i>Flexural Modulus (psi)</i>	3.08 x 10 ⁶ – 3.13 x 10 ⁶	2.22 x 10 ⁶ – 2.85 x 10 ⁶
<i>Compressive Strength (kPsi)</i>	63.8 – 68.6	37.3 – 45.7
<i>Compressive Modulus (psi)</i>	1.85 x 10 ⁶ – 1.90 x 10 ⁶	1.49 x 10 ⁶ – 1.64 x 10 ⁶
<i>Shear Strength (kPsi)</i>	15.8 – 16.3	-

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⁵ At room temperature

⁶ At room temperature

⁷ Tested at 10 to 200 kHz

⁸ Tested at 264 psi loading