

# Technical Data Sheet

## GEHR PMMA<sup>®</sup>



### I. Physical Properties

	Test method	Unit	Value
1. Specific gravity	ASTM D792	g/cm <sup>3</sup>	1.15
2.a Water Absorption (saturation)	ASTM D570	%	2.1
2.b Humidity Absorption (saturation)			0.4
3.a Maximum permissible service temp.	UL 746B	°F	158
3.b Lower permissible service temp.			-

### II. Mechanical Properties

1. Tensile strength at yield	ASTM D638	psi	6,090
2. Tensile Modulus			290,000
3. Elongation at yield.		%	-
4. Tensile strength at break		psi	-
5. Elongation at break		%	35
6. Impact strength	ASTM D256	ft-lb/in	-
7. Notch impact strength		ft-lb/in	0.8
8. Ball indentation / Rockwell hardness	ASTM D785	R-Scale	110
9. Shore-D	ASTM D2240	-	-
10. Flexural strength	ASTM D790	psi	9,430
11. Flexural Modulus			-

### III. Thermal Properties

1. Vicat-softening point	VST/B/50	ASTM D1525	°F	221
	VST/A/50			-
2. Heat deflection temperature	HDT/B (66 psi)	ASTM D648	°F	-
	HDT/A (264 psi)			189
3. Coefficient of linear thermal expansion		ASTM D696	in/in/°F *10 <sup>-5</sup>	4.4
4. Thermal conductivity at 73 °F		ASTM C177	BTU/hr-ft*°F	-
5. Glass transition temperature		ASTM D3418	°F	220
6. Melting temperature				220

### IV. Electrical Properties

1. Volume resistivity	ASTM D257	Ω*cm	≥10 <sup>13</sup>
2. Surface resistivity		Ω	≥10 <sup>13</sup>
3. Dielectric constant at 1MHz	ASTM D150	-	-
4. Dielectric loss factor at 1 MHz		-	-
5. Dielectric strength	ASTM D149	V/mil	-
6. Tracking resistance	IEC 60112	Grade	-

### V. Additional Data

1. Bondability	-	-	yes
2. Compliances <sup>8)</sup>	FDA	-	yes
	NSF	-	no
3. Flammability <sup>8)</sup>	UL 94	-	HB <sup>7)</sup>
4. Limited Oxygen Index (LOI)	ASTM D2863	%	17
5. UV stabilization	-	-	yes
6. Optical Transmittance			88
7. Optical Haze	ASTM D1003	%	2.5

<sup>7)</sup> tested but not listed

<sup>8)</sup> tested only for natural colored material

All values are attributes of the used raw materials.

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