

**CYROLITE® GS-90**

PMMA

Evonik CYRO LLC

<b>Processing/Physical Characteristics</b>	<b>Value</b>	<b>Unit</b>	<b>Test Standard</b>
<b>ASTM Data</b>			
Melt Flow Index, MFI	<b>6.5</b>	g/10min	ASTM D 1238
Temperature	<b>230</b>	°C	-
Load	<b>5</b>	kg	-
Mold Shrinkage, MD	<b>0.005</b>	mm/mm	ASTM D 955
<b>Mechanical properties</b>			
<b>ASTM Data</b>			
Tensile Modulus	<b>2200</b>	MPa	ASTM D 638
Tensile Strength	<b>46.9</b>	MPa	ASTM D 638
Elongation at Yield	<b>3.6</b>	%	ASTM D 638
Elongation at Break	<b>6.7</b>	%	ASTM D 638
Flexural Modulus	<b>2300</b>	MPa	ASTM D 790
Flexural Strength	<b>74.5</b>	MPa	ASTM D 790
Rockwell Hardness	<b>M 30</b>	-	ASTM D 785
Izod Impact notched, 1/4 in	<b>107</b>	J/m	ASTM D 256
Izod Impact notched, Low-Temperature	<b>43</b>	J/m	ASTM D 256
Temperature	<b>0</b>	°C	-
<b>Thermal properties</b>			
<b>ASTM Data</b>			
Coefficient of Thermal Expansion, MD	<b>95</b>	E-6/K	ASTM D 696
Vicat Temperature	<b>99</b>	°C	ASTM D 1525
<b>Optical properties</b>			
<b>ASTM Data</b>			
Haze	<b>3</b>	%	ASTM D 1003
Light Transmittance	<b>89</b>	%	ASTM D 1003
<b>Other properties</b>			
Water Absorption, Equilibrium	<b>0.3</b>	%	ASTM D 570
Density	<b>1110</b>	kg/m <sup>3</sup>	ASTM D 792
Bulk Density	<b>650</b>	kg/m <sup>3</sup>	-
<b>Processing Recommendation Injection Molding</b>			
Pre-drying - Temperature	<b>71</b>	°C	-
Pre-drying - Time	<b>3 - 4</b>	h	-
Melt temperature	<b>210 - 232</b>	°C	-
Mold temperature	<b>49 - 82</b>	°C	-
Zone 1	<b>190 - 218</b>	°C	-
Zone 2	<b>210 - 232</b>	°C	-
Zone 3	<b>210 - 232</b>	°C	-
Nozzle temperature	<b>210 - 232</b>	°C	-
Injection pressure	<b>41 - 103</b>	MPa	-
Back pressure	<b>0 - 0.69</b>	MPa	-

**Characteristics****Processing**

Injection Molding, Other Extrusion

**Special Characteristics**

High impact or impact modified, Transparent

**Certifications**

Food contact, Food approval FDA 21 CFR, Medical Grade, Biocompatibility ISO 10993, US Pharmacopeia Class VI Approved

**Applications**

Medical, Packaging

**Features**

Color Stability, Light Guiding

**Regional Availability**

North America

**Chemical Resistance**

General Chemical Resistance, Oil Resistance, Radiation Resistance