

Tenopex® GS11HC-AF Polycarbonate Technical Data Sheet

Description and Applications

Tenopex® GS11HC-AF is a high performance, optical grade polycarbonate film featuring a durable double-sided anti-fog coating. Designed to deliver exceptional clarity under high humidity and temperature variations, it effectively prevents fogging and condensation even in demanding environments. The specialized coating enhances surface hardness and provides reliable abrasion resistance, maintaining optical transparency after repeated cleaning and handling. Tenopex® GS11HC-AF ensures long-lasting visual performance and durability for protective eyewear, medical face shields and other safety applications where optical quality and surface integrity are critical.

Typical Property Values

Property	Test Method	Units	Value
Physical			
Density	ASTM D792	g/cm ³	1.2
Water Absorption, 24 hrs	ASTM D570	%	0.35
Pencil Hardness	JIS-D5400		HB
Optical			
Light Transmission	ASTM D1003	%	88 - 90
Refraction Rate	JIS-D7105	%	1.49
Haze	ASTM D1003	%	< 0.4
Mechanical			
Tensile Strength	ASTM D882	MPa	≥ 60
Tensile Elongation at Break	ASTM D882	%	120 - 150
Free Falling Impact Strength	ASTM D1709-09	g	≥ 2000
Thermal			
Standard Temperature Resistance	ASTM D1525	°C	120
Heat Distortion Temperature	ASTM D1637	°C	140
Melting Temperature	DSC Scanning	°C	255
UL Flammability			
Film thickness ≤ 0.25mm	UL94		VTM-2
Film thickness ≥ 0.375mm	UL94		V-2
Anti-Fog Properties		Results	Test Method
Anti Fog @ 60°C / 3mins x 3 times	Clear without Fog	Place sheet sample over a beaker with 60°C water	
Anti Fog @ 15°C / 3 hours	Clear without Fog	Place sheet sample in fridge -15°C for 3 hours. Afterwhich, exhale and breathe onto sample.	
Anti Fog @ -20°C	Clear without Fog	Attach sheet sample onto face helmet and place in fridge -20°C. Observe clarity / haze after.	
Soak Test	Clear without Fog	Soak sheet sample in room temperature water for 3 days, then dry @ 80°C for 1 hour. Afterwhich exhale & breathe onto sample.	

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These are typical properties and are not intended for specifications purposes. If minimum certifiable properties are required, please contact your local sales representative. Reported values are based on 0.250mm thickness film unless otherwise noted.

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