

CHEMISTRY THAT MATTERS™

سابک  
sabic

# CLARITY+ VISION

INTRODUCING LEXAN™ HP92AF  
ANTI-FOG FILM, FOR LENSES USED  
IN HIGH HUMIDITY ENVIRONMENTS





From automotive applications and lighting application to anti-fog lens products, LED/LCD displays, battery packs, ID cards and much more, SABIC's Functional Forms business offers high-quality, engineered thermoplastic LEXAN™ (PC) films across a wide variety of industries.

As the demand rises for safer, higher quality and more effective solutions for safety eyewear, SABIC introduces LEXAN™ HP92AF Anti-fog film. HP92AF is a one-side coated polycarbonate film with clear differentiation of very limited reduction in visibility specifically under high humidity environments. It offers anti-fog, abrasion and impact resistance and excellent optical clarity. This combination of properties makes it an excellent choice for goggles, lenses and visors where sudden changes in temperature occur. The masking is of the cling type on the uncoated side and of the stick type on the coated side.

### TYPICAL APPLICATIONS

- Safety goggles
- PPE clear face shields in high humidity environments
- Motorcycle visors
- Ski goggles
- Automotive cluster lenses
- Medical instrument lenses & displays
- Industrial lenses

### PROPERTIES

- 
**ANTI-FOG**  
 Maintains clarity with no flashover (fogging)
- 
**EXCELLENT OPTICAL CLARITY**  
 Light Transmission >88%
- 
**HIGH IMPACT STRENGTH**  
 Virtually unbreakable and resistant to abrasion
- 
**THERMAL STABILITY**  
 Against varying temperature conditions
- 
**CHEMICAL RESISTANCE**  
 Withstands repeated cleaning
- 
**PRINTABLE**  
 for customized design and aesthetics

### TYPICAL PROPERTY VALUES

PROPERTY	ASTM (ISO) TEST METHOD	UNITS USCS (SI)	VALUE
<b>MECHANICAL</b>			
Tensile Strength			
@ Yield	ASTM D882 (ISO 527)	psi (MPa)	8800 (60)
Ultimate	ASTM D882 (ISO 527)	psi (MPa)	9000 (62)
Tear Strength			
Initiation	ASTM D1004	lb/mil (kN/m)	1.51 (264)
Propagation	ASTM D1922	g/mil (kN/m)	40 (14)
<b>THERMAL</b>			
Vicat Softening Temperature, B	ASTM 1525	°F (°C)	320 (160)
Heat Deflection Temp. by TMA at 1.8 Mpa	ISO 75 Modified	°F (°C)	290 (145)
Shrinkage at 302°F (150°C)	ASTM D1204	%	1.40%
<b>PHYSICAL</b>			
Anti-fog Properties	Exposure to 50C Water	Time to Fog	No flash over
Density	ASTM D792 (ISO 1183)	slug/ft <sup>3</sup> (kg/m <sup>3</sup> )	2.3 (1200)
Thermoforming		% Thinning	<10
Pencil Hardness (coated surface)	ASTM D3363	-	B-HB
Taber Abrasion	ASTM D1044	delta Haze	15-20%
<b>OPTICAL</b>			
Refractive Index @77°F (25°C)	ASTM D542A	-	1.5
Light Transmission	ASTM D1003	%	>88
Yellowness Index	ASTM D1925	%	0.6
Haze	ASTM D1003	%	<0.5

### CHEMICAL RESISTANCE

CHEMICAL CLASS	EFFECTS
Alcohols	Generally compatible, tested at 1 hour continuous surface contact at 73 °F
Acetone	Not compatible
Detergents and Cleaners	Generally compatible, tested at 24 hours surface contact at 120 °F Cleaners like Mr. Clean* and Windex w/Ammonia D**
Flavors	Not compatible for concentrates such as coffee, tea, mustard, ketchup
Gasoline	Not compatible at elevated temperatures and stress levels

\* Mr. Clean are registered trademarks of Procter & Gamble,  
 \*\* Windex w/Ammonia D is a registered trademark of Drackett Products Company

### NOMINAL GAUGE RANGE

GAUGE : 7 mil (0.175mm) to 30 mil (0.762mm)  
 WIDTH : 48" (1220mm)

WITHOUT ANTI-FOG

WITH ANTI-FOG



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