

# TUFFAK AR Polycarbonate Mirrored Sheet Properties

## PLASKOLITE

FABBACK® Plaskolite products are strong, lightweight thermoplastic materials that have developed a wide use as a replacement for glass mirror, especially where the risk of higher stresses is greater and where safety is a concern. Plaskolite mirrors can be used as a reflecting surface in decoration, visual merchandising and store design and frees creative designers from the esthetic and physical limitations of ordinary glass.

TUFFAK AR Mirror is a virtually unbreakable mirror improving safety and eliminating the hazards associated with broken glass. The high optical quality polycarbonate substrate provides clear mirror images and outstanding strength and impact, security and flame resistance. The product is lightweight (half the weight of glass) and a curable coating protects the mirrored second surface, making it easy to fabricate and install.

Polycarbonate mirror is available in 3mm and 6mm in 2440 x 1220 sheet and can be saw cut, router cut or laser cut. A cutting service is available using our wall saw.

### Typical Properties\*

Property	Test Method	Units	Values
<b>Physical</b>			
Specific Gravity	ASTM D792	-	1.2
Poissons's Ratio	ASTM E132	-	0.38
Taber Abrasion @ 100 Cycles. Delta Haze CS-10F Wheel @ 500 g load	ASTM D1044	%	4**
<b>Mechanical</b>			
Tensile Strength, Ultimate	ASTM D638	psi	9,500
Tensile Strength, Yield	ASTM D638	psi	9,000
Tensile Modulus	ASTM D638	psi	340,000
Elongation	ASTM D638	%	110
Flexural Strength	ASTM D790	psi	13,500
Flexural Modulus	ASTM D790	psi	345,000
Compressive Strength	ASTM D695	psi	12,500
Compressive Modulus	ASTM D695	psi	345,000
Shear Strength, Ultimate	ASTM D732	psi	10,000
Shear Strength, Yield	ASTM D732	psi	6,000
Shear Modulus	ASTM D732	psi	114,000
Instrumented Impact @ 0.118"	ASTM D256	ft-lbs/in	47
<b>Thermal</b>			
Coefficient of Thermal Expansion	ASTM D696	in/(in-°F)	3.75 x 10 <sup>-5</sup>
Coefficient of Thermal Conductivity	ASTM C177	BTU-ft/(hr-ft <sup>2</sup> -°F)	0.1125
Heat Deflection Temperature @ 264 psi	ASTM D648	°F	270
Heat Deflection Temperature @ 66 psi	ASTM D648	°F	280
Brittleness Temperature	ASTM D746	°F	-200

\*Typical Properties are not intended for specification purposes

\*\* Taber Performance of the abrasion resistant coating measured on clear sheets

These suggestions and data are based on information we believe to be reliable. They are offered in good faith, but without guarantee as conditions and methods of use are beyond our control. We recommend that the prospective user determine the suitability of our materials and suggestions before adopting them on a commercial scale.

### Typical Properties\*

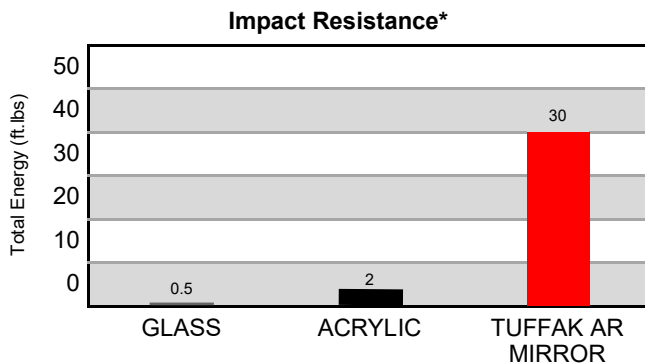
Property	Test Method	Units	Values
<b>Flammability</b>			
Horizontal Burn, AEB	ASTM D635	in.	<1
Ignition Temperature Self	ASTM D1929	°F	1022
Ignition Temperature Flash	ASTM D1929	°F	824

TUFFAK AR polycarbonate mirror is ideally suited for a variety of applications using standard plastic fabrication processes and techniques.

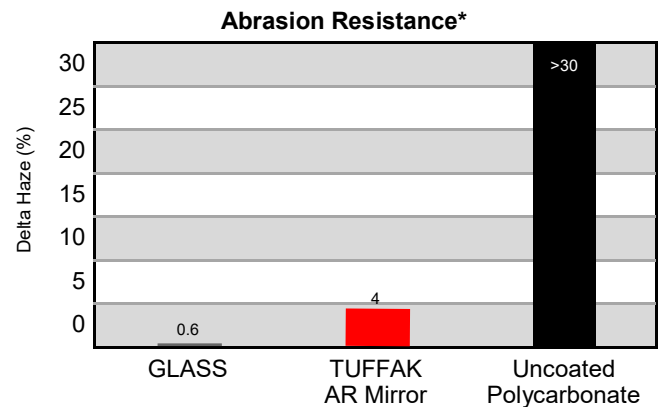
- ◆ Economical
- ◆ Does not shatter into sharp-edged pieces like glass
- ◆ More lightweight when compared to glass mirrors
- ◆ Made with TUFFAK Polycarbonate

### Applications

- ◆ High traffic and abusive environments
- ◆ Prisons
- ◆ Detentions centres
- ◆ Hospitals



\* Instrumental Impact per ASTM D3763. Sample thickness is 0.118" nominal



\* Taber Abrasion per ASTM D1044 cycles using CS-10F wheels at 500 g load

Test Method* (soft cloth soaked with...)	Results
Ammonium Hydroxide (100%)	0% change in haze
Hydrochloric Acid	
Acetone	
Kerosene	
Toluene	

\* Vigorous rub for 2 minutes

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