

The Art & Science of Protection

Optium® Acrylic™ Products

Optium® Acrylic™ & Optium® Museum Acrylic™

For Artwork, Prints, Photographs & Collectibles

Tru Vue® Optium® Technology

Optium® Acrylic™ and Optium® Museum Acrylic™ are manufactured utilizing a clear abrasion-resistant acrylic sheet. A sputtered thin film multi-layered anti-reflection coating is applied to both sides of the acrylic sheet using patented Tru Vue® Optium technology. The coating is engineered for demanding optical requirements, durability, and strength.

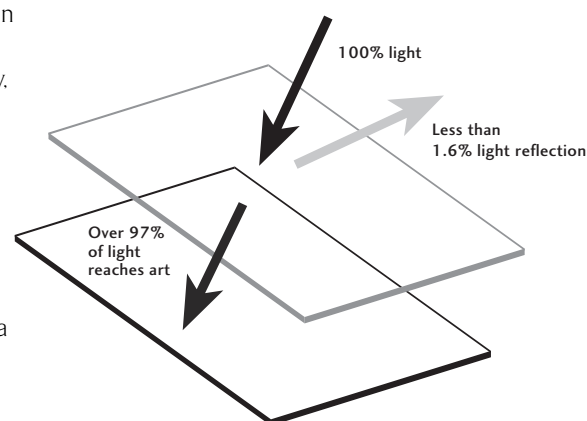
Optium Museum Acrylic is the only acrylic product available combining both a high quality sputtered anti-reflection coating and superior 98% ultraviolet light blocking protection.

Optium Acrylic Products vs. Standard Glass

Optium Acrylic products are anti-reflection coated, anti-static, lightweight, and offer a more secure environment against breakage than glass.

Features and Benefits:

- Lightweight
- Superior Optical Qualities
- Enhanced Security
- Anti-Static
- Anti-Reflective
- Low-Tack Protective Film
- Cleans with Ammonia-Free Glass Cleaner



Optium Acrylic Size Availability

3.0mm (1/8") & 4.5mm (3/16") Thickness

Size	Sq. Ft./Lite	Lites/Box	Total Sq. Ft.
41x71in./104x180cm	20.22	4	80.88
41x71in./104x180cm	20.22	1	20.22

6.0mm (1/4") Thickness *(Available in Optium Museum Acrylic only)*

Size	Sq. Ft./Lite	Lites/Crate	Total Sq. Ft.
72x120in./183x305cm	60	1	60
72x120in./183x305cm	60	25 (pallet)	1,500
72x120in./183x305cm	60	20 (crate)	1,200

Approximate weight per lite: 85 lbs.

Approximate weight of empty crate: 622 lbs.

Call for availability and a participating distributor of 72x120in./6.0mm.



TRU VUE
A Subsidiary of Apogee Enterprises, Inc.

For Artwork, Prints, Photographs & Collectibles

The Art & Science of Protection

Optium[®] Acrylic[™] Products

Optium[®] Acrylic[™] & Optium[®] Museum Acrylic[™]

Product Comparison Chart

Optium® Acrylic 3.0mm		Optium® Acrylic 4.5mm		Optium® Museum Acrylic™ 6.0mm		Optium® Museum Acrylic™ with OP-3 UV Filtering 3.0mm (also available in 4.5mm)		
Physical Characteristics								
Size	41x71in./104x180cm		41x 71in./104x180cm		72x120in./183x305cm		41x71in./104x180cm	
Availability	1 lite box/20.22 sq. ft. or 4 lite box/80.88 sq. ft.		1 lite box/20.22 sq. ft. or 4 lite box/80.88 sq. ft.		1 lite/ 60 sq. ft.		1 lite box/20.22 sq. ft. or 4 lite box/80.88 sq. ft.	
Thickness	1/8 in./3.0mm +/-0.3mm		3/16 in./4.5mm +/-0.3mm		1/4 in./6.0mm +/-0.3mm		1/8 in./3.0mm +/-0.3mm	
Weight	14.4 lbs. per lite/0.7 lbs. per sq. ft.		21.6 lbs. per lite/1.0 lbs. per sq. ft.		85 lbs. per lite/1.4 lbs per sq. ft.		14.4 lbs. per lite/0.7 lbs. per sq. ft.	
Substrate	Clear abrasion-resistant acrylic		Clear abrasion-resistant acrylic		Clear abrasion-resistant acrylic		Clear abrasion-resistant OP-3 acrylic	
Coating	Sputtered anti-reflection		Sputtered anti-reflection		Sputtered anti-reflection		Sputtered anti-reflection	
Security	Provides a secure environment		Provides a secure environment		Enhanced security		Provides a secure environment	
Performance Data								
UV Protection 300-380nm	93%		93%		98%		98%	
Light Transmission	97%		97%		97%		97%	
Light Reflection	<1.6%		<1.6%		<1.6%		<1.6%	
Resistivity	1x10 ¹⁰ (Ohms/Sq.)		1x10 ¹⁰ (Ohms/Sq.)		1x10 ¹⁰ (Ohms/Sq.)		1x10 ¹⁰ (Ohms/Sq.)	
Anti-Static	Yes		Yes		Yes		Yes	
Anti-Reflective	Both sides		Both sides		Both sides		Both sides	
Outgassing	None (less than 200°F)		None (less than 200°F)		None (less than 200°F)		None (less than 200°F)	
Application Recommendations								
Space needed for Expansion & Contraction	Allow at least 1/16th” of clearance for each 12” of frame length. In conditions of extreme humidity or temperature, greater allowances may be necessary.							
Rabbit Size	When estimating the rabbit size, allow 3.0mm (0.125 inches) for the glazing and add to it the thickness of each of the other components used. Insuring the proper rabbit size is essential in supporting the framing components and helps insure against bowing.		When estimating the rabbit size, allow 4.5mm (0.18 inches) for the glazing and add to it the thickness of each of the other components used. Insuring the proper rabbit size is essential in supporting the framing components and helps insure against bowing.		When estimating the rabbit size, allow 6.0mm (0.25 inches) for the glazing and add to it the thickness of each of the other components used. Insuring the proper rabbit size is essential in supporting the framing components and helps insure against bowing.		When estimating the rabbit size, allow 3.0mm (0.125 inches) for the glazing and add to it the thickness of each of the other components used. Insuring the proper rabbit size is essential in supporting the framing components and helps insure against bowing.	
Maximum # of Mats	Any		Any		Any		Any	
Application	Frame sizes up to 41” x 71” Pastels, Charcoal, and Static Sensitive Pieces. Shadowboxes B&W & Bright Colored Pictures Posters Large Pieces, Shipping, Earthquake Zones, Safety Areas				Frame sizes up to 72” x 120” Pastels, Charcoal, and Static Sensitive Pieces. Shadowboxes B&W & Bright Colored Pictures Posters Large Pieces, Shipping, Earthquake Zones, Safety Areas		Frame sizes up to 41” x 71” Pastels, Charcoal, and Static Sensitive Pieces. Shadowboxes B&W & Bright Colored Pictures Posters Large Pieces, Shipping, Earthquake Zones, Safety Areas	
Cutting/Cleaning/Handling								
Cutting	Place Optium Acrylic on a clean, dust-free work area. Cover the work table with a soft, clean, lint-free felt. Use a Multi-Material cutter “scribe and break” method.				Fabricate using a power saw with a saw blade specifically designed to cut acrylic.		Place Optium Acrylic on a clean, dust-free work area. Cover the work table with a soft, clean, lint-free felt. Use a Multi-Material cutter “scribe and break” method.	
Cleaning	Use an ammonia–free glass cleaner and a lint-free or micro-fiber cloth. Spray the solution on the cloth and then apply to the acrylic. Do not use regular acrylic cleaners.							
Handling	Cotton or nitrile rubber gloves should be used to minimize finger-prints and other particles. Optium Acrylic products are covered with a protective film masking on each surface. This masking prevents scratching during handling and cutting and should be left in place on the sheet as long as possible. To remove the masking, start at one corner and pull towards the opposite side of the sheet slowly and evenly without stopping. The masking should never be exposed to excessive sunlight or outdoor conditions for extended periods of time.							

Durability and Environmental Requirements

Abrasion Resistance: Performs in accordance with Military Specification MIL-C-14806A, para. 4.4.7 & MIL-M-13508C, para. 4.4.5.

Adhesion: Performs in accordance with Military Specification MIL-C-48497A, para. 4.5.3.1.

Humidity Resistance: Performs in accordance with Military Specification MIL-C-48497A, para. 4.5.3.2.

Solubility: Performs in accordance with Military Specification MIL-C-48497A.

After a 24-hour immersion or exposure at room temperature (60°- 90°F), the anti-reflection coating will show no deterioration in the following solutions:

- Distilled Water
- Saline Solution (170gm of NaCl per 3.8 liters of water)
- Acetone
- Ethyl Alcohol
- Isopropyl Alcohol
- Coffee
- Coke

Environmental Testing Methods: Performs in accordance with Military Standard MIL-STD-810E.

Material Data

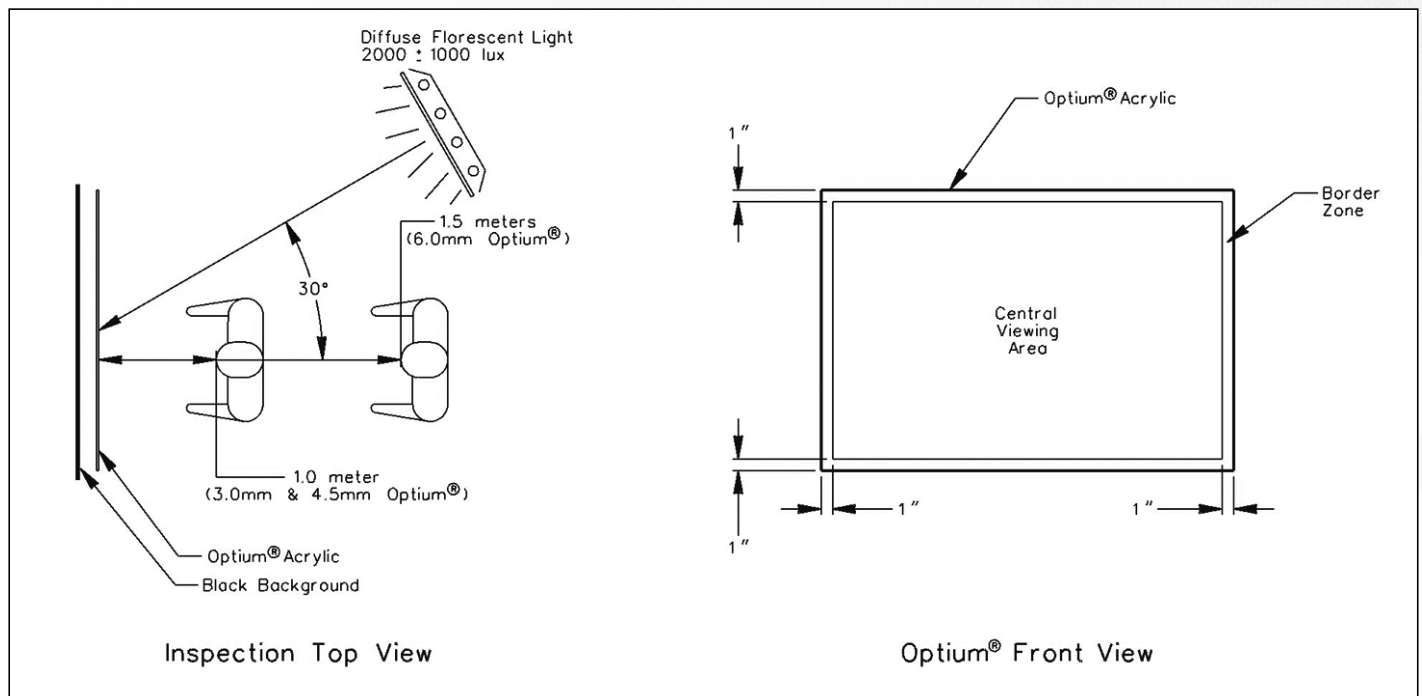
Softening Point: 200°F (93°C)

Acrylic will soften and deflect but not liquefy.

Decomposition Temperature: >500°F (260°C)

At or above this temperature, acrylic will emit hazardous substances (e.g. carbon monoxide, carbon dioxide, methyl methacrylate, methane, ethane, acetylene, methyl isobutyrate, and methyl propionate).

Auto-ignition Temperature: 830°F (443°C)



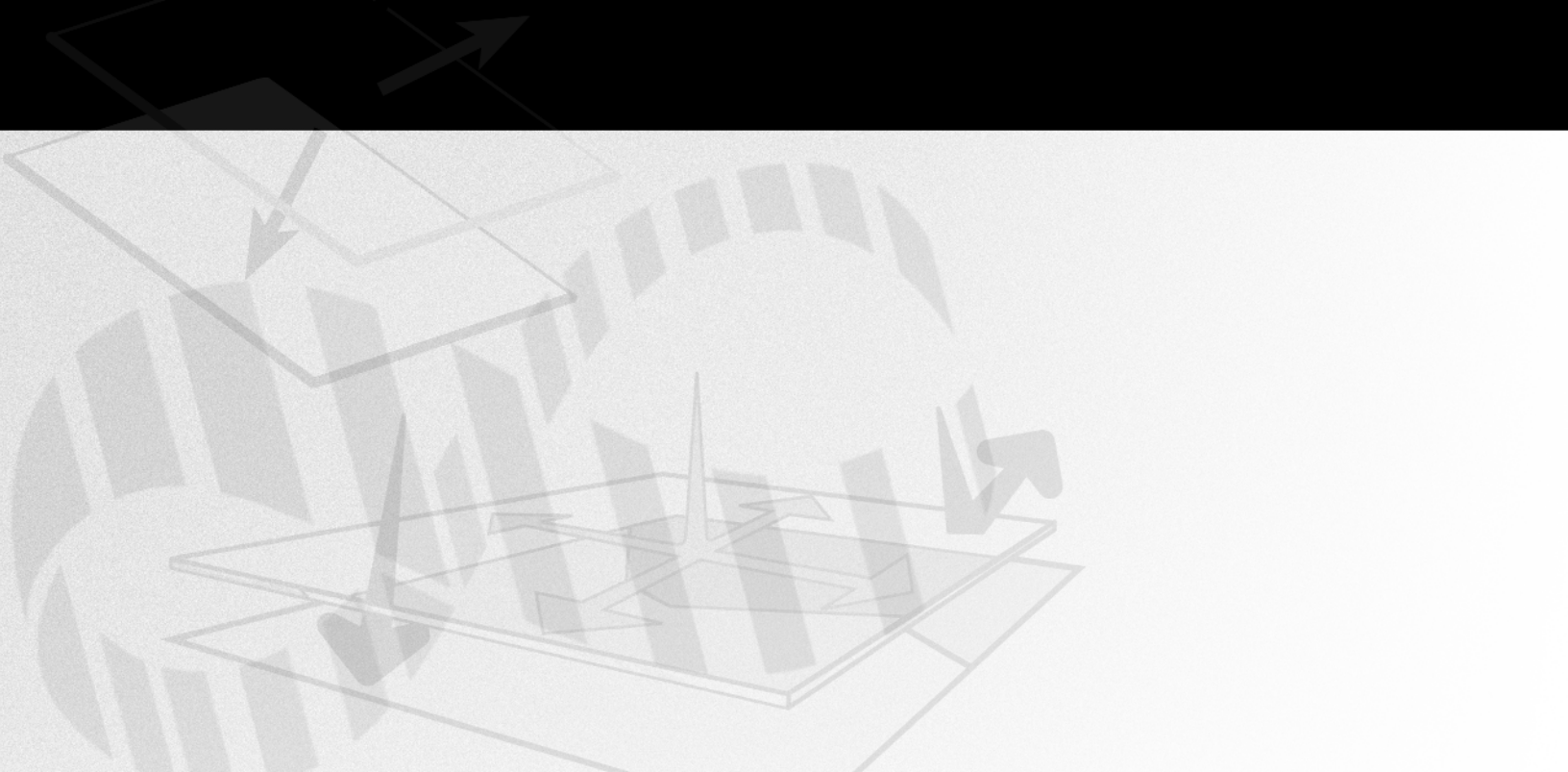
Inspection Requirements

Reflected Light Inspection: Optium products are to be inspected in reflected light at a distance of approximately 1 meter (1.5 meter - 6.0mm Optium) from the observer. The part will be held against a black background. Cosmetic defect criteria are determined at the observer location.

Border Zone Specification: Optium products are visually inspected according to Tru Vue specifications V3SL03007 & V3SL03037. Each sheet of Optium contains a 1"

perimeter border (Border Area) that is subject to inherent processing conditions and may cause the optical and cosmetic performance to be non-conforming in that area.

Cosmetic Defect Standards: Performs in accordance with Tru Vue Optium Specifications V3SL03007 (3.0mm & 4.5mm) and V3SL03037 (6.0mm).



Maryland Glass & Mirror Company

MUSEUM GLAZING

SERVICES



710 W. Ostend St.
Baltimore, MD 21230

410-727-1050 • 800-352-3380

F 410-727-1080

www.mdglass.net

The Art & Science of Protection

Optium®
Acrylic™ Products



TRU VUE®

A Subsidiary of Apogee Enterprises, Inc.

9400 W. 55th Street, McCook, IL 60525

To locate the Tru Vue distributor
nearest you, call 1-800-282-8788.

E-mail: info@tru-vue.com

www.tru-vue.com

180-0074FSMG

1106

© 2006 Tru Vue, Inc.

Tru Vue, the Tru Vue logo and Optium are registered trademarks and Optium Acrylic and Museum Acrylic are trademarks of Tru Vue, Inc., McCook, IL, USA.

The Apogee logo is a registered trademark of Apogee Enterprises, Inc., Minneapolis, MN, USA.



enterprises, inc.