3M[™] Crystal Glass Finishes

Technical Data Sheet Crystal Revision B, June 2014

Product Description

3M[™] Crystal Glass Finishes (the "Products") offer both dusted and frosted designs that provide the look of sandblasted or etched glass, at a fraction of the cost. You can digitally print on the Products for both customization and personalization options. These permanent, pressure-sensitive films have a transparent polyester liner for easy cutting. They are available in a dusted crystal finish in translucent white (3.2 mil/0.08mm) or a translucent frosted crystal finish (4.7 mil /0.12mm) in six colors.



 $3M^{\mbox{\scriptsize TM}}$ Crystal Glass Finishes add visual interest and unlimited design potential to interior glass.



 ${\rm 3M^{TM}}$ Crystal Glass Finishes can soften the view through interior glass partitions.

Product Characteristics

The values in these tables are typical, and are based on test data deemed reliable but are not warranted.

Common Characteristics	Value
Material	Vinyl
Thickness with Adhesive	Dusted Crystal: 3.2 mil (0.08mm) Frosted Crystal: 4.7 mil (0.12mm)
Adhesive Type	Pressure sensitive
Adhesive Color	Clear
Adhesion 24 hours after application	Acrylic: 4 pounds/inch (0.7 kg/cm) Glass: 4 pounds/inch (0.7 kg/cm) Polycarbonate: 4 pounds/inch (0.7 kg/cm)
Liner	Transparent polyester, 4 mil (0.1mm)
Roll Size	48" x 50 yards (122cm x 46m) 60" x 50 yards (152cm x 46m)
Flammability	When used win Interior Applications, Products have the National Fire Protection Class A (as defined in NFPA 101 "Life Safety Code" Test Method ASTM E84).
Chemical Resistance	Resists mild alkalis, mild acids, and salt Excellent resistance to water (except immersion)

Type Specific Characteristics	Value		
	Dusted Crystal	Frosted Crystal	
Colors	314 Dusted Crystal	 323 Frosted Rose 324 Frosted Crystal 325 Frosted Violet Sky 326 Frosted Mint 327 Frosted Blue Mist 331 Frosted Gold 	
Tensile Strength minimum	5 pounds/inch at 73°F (0.9 kg/cm at 23°C)	3.5 pounds/inch at 73°F (0.6 kg/cm at 23°C)	
Visible Light Reflectance *	79%	12%	
Visible Light Transmittance*	85%	72%	
Shading Coefficient *	0.93	0.82	
UV Transmittance *	27%	20%	
Solar Heat Reflectance *	7%	10%	
Solar Heat Transmittance *	76%	64%	
Solar Heat Absorbance *	17%	26%	

*As measured on 6mm clear glass.



Application Characteristics

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Characteristic	Value
Product Orientation	Vertical
Surface Type	Flat
Substrate Type	Glass, acrylic, polycarbonate
Application Temperature	50°-100°F (10°-38°C) air and substrate
Application Method	Wet
Applied Product Shrinkage	0.10 inch (0.3mm) maximum
Applied Product Exposure Temperature	-40° - +225°F (-40° - +107°C)
Product Removal	None, permanent

Fabrication Considerations

Inkjet Printing

Films 7725SE-314 and 7725SE-324 are inkjet printable. The fabricator must test, approve and accept all responsibility for satisfactory use.

Opacity

This film can be used on opaque surfaces but has less hiding power than a film with a colored adhesive. Consider this characteristic when selecting and preparing the substrate.

Cutting

Based on cutting and weeding evaluations that used Helvetica medium upper case, the recommended minimum cutting height for text is 0.375 inch (0.95 cm). Because of the differences in electronically-controlled cutting equipment and font characteristics, users should determine their own cutting and weeding capability.

- Sharpness of the knife blade. Dull blades create a serrated look to the cut edge of the film.
- Weight on the knife blade. The ideal weight slightly scores the liner. Too little weight does not cut completely through the film and the adhesive. Excessive weight cuts the liner. It also causes the blade to drag, accelerating wear and eventually creating a serrated cut edge on the film.
- Temperature and relative humidity are minor considerations, but avoid extreme or rapidly fluctuating conditions.
- Store the film in the same environment as the cutting equipment.
- Consider the stroke width of characters, style of serifs or extensions, and small details of scanned or digitized artwork.
- The minimum recommended stroke width is 0.040 inch (1.0 mm) when film is exposed to cleaning or other physical stress.

Weeding

Please see Installation Guide Crystal for details.

Limited Warranty and Limited Remedy

Limited Warranty

1. 3M warrants that a Product will be free from defect in manufacture ("3M Warranty") on 3M's Product shipment date ("Warranty Period"). EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, THE 3M WARRANTY IS MADE IN LIEU OF ALL OTHER WARRANTIES, RIGHTS OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND THOSE ARISING FROM A COURSE OF DEALING, CUSTOM OR USAGE OF TRADE. THE BUYER IS RESPONSIBLE FOR DETERMINING IF A PRODUCT IS SUITABLE FOR ITS PARTICULAR PURPOSE AND APPLICATION METHODS.

2. For a buyer's convenience, 3M may provide engineering or technical information, recommendations, installation instructions, and other information or materials relating to Product ("Other Product Information"), but 3M makes only the 3M Warranty and does not warrant any Other Product Information.

3. 3M has no obligation under the 3M Warranty as to Product that has been: (a) modified, altered or processed in any manner; (b) stored, applied, installed, or used in a manner other than that 3M recommends in this Technical Data Sheet and in all Other Product Information; (c) damaged through contact with a person or thing, misuse, accident, neglect, or other action by anyone other than 3M; or (d) exposed to excessive heat, humidity, dirt or UV light.

Limited Remedy

If any Product is proven not to have met the 3M Warranty on the buyer's receipt, then the buyer's exclusive remedy, and 3M's sole obligation, will be, at 3M's option, to replace that Product quantity or refund the applicable purchase price.

Limitation of Liability

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