



Backpainted Glass Technical Manual

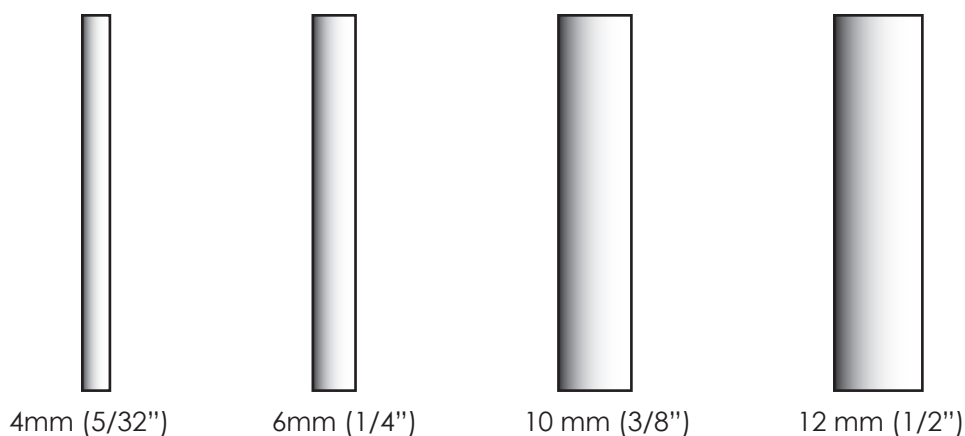


Element Designs manufactures custom backpainted glass for both commercial and residential applications. Custom backpainted glass is available in a variety of thicknesses in either gloss or matte finish. Backpainted glass is an ideal product for a variety of applications such as wall panels, partitions, backsplashes, table tops, countertops and even trade show flooring. The durability of glass combined with vibrant color result in beautiful surface materials for any application. Element Designs offers nine standard colors, 177 non-standard colors and full custom color matching capabilities to fully meet all of your design expectations.

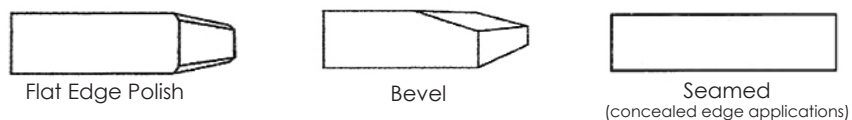
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Glass Types



Edge Finish Options



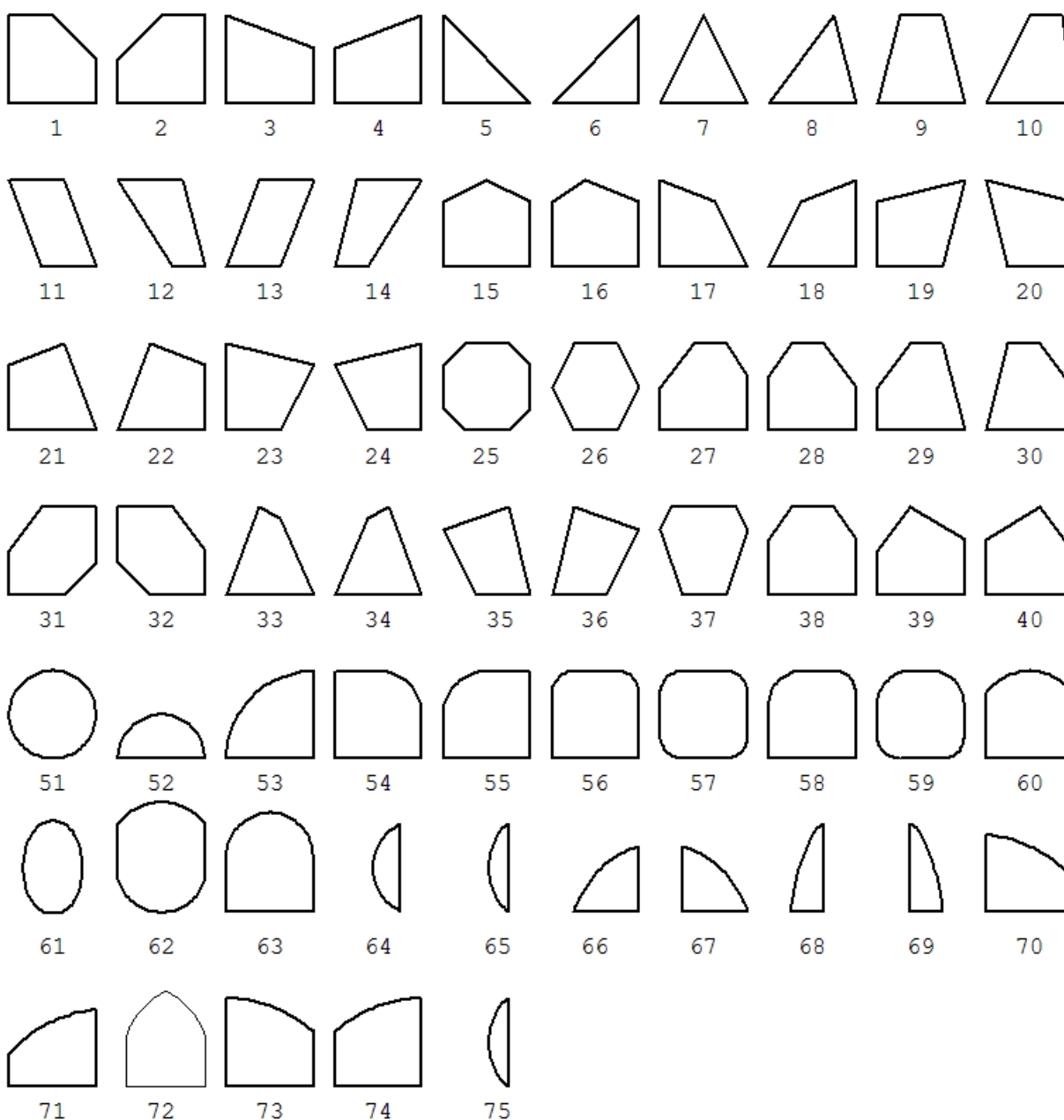
*Please refer to Design Guidelines for Edge Finish Availability for specific thicknesses

Design Guidelines

Thickness	Gloss	Matte (Single Side Acid Etched)	Edge Finish Availability	Recommended Uses
4mm (5/32")	Yes	Yes	Flat, Seamed	Horizontal & Vertical: Door inserts or framed applications
6mm (1/4")	Yes	Yes	Flat, Seamed	Horizontal & Vertical: Backsplashes, wall cladding, shelving
10mm (3/8")	Yes	No	Flat, Bevel, Seamed	Horizontal: Table tops, countertops, shelving
12mm (1/2")	Yes	Yes	Flat, Bevel, Seamed	Horizontal: Table tops, countertops

- All Element Designs glass is tempered. Tempered glass will not have an etched tempered logo unless otherwise specified at time of order.

- Element Designs' backpainted glass be fabricated to include notches, cut-outs, holes and custom shapes. The following images represent industry accepted shapes which can be fabricated to your desired specifications.
- All custom shapes must be accompanied by an electronic drawing at time of orders. Element Designs does not accept paper templates.
- Glass holes must be located at least twice the thickness of the glass, away from the edge.
- All custom shapes are subject to approval .



- All internal cut edges will be unfinished, seamed edges, NOT Flat Edge polish.

Element Designs provides an additional water based coating (backer) on the color-coated surface for additional durability and to provide 100% opaqueness. Standard backer is light grey. Alternative backer colors may be available upon request.

Standard Colors



Custom Color Match

Element Designs can provide exact color matches for custom projects. A custom color match fee covers the paint matching process and two 4" x 4" samples for approval. Samples of non-standard colors can also be obtained for a fee.

NOTE: Element Designs strongly recommends that the end user review the color choice on the glass thickness for exact color matching prior to placing a production order. Various glass thicknesses can optically distort the backpainted glass color when viewed through the glass.

Color swatches of these printed samples may vary slightly over time, and as such are only to be considered as a guide. Please order an actual backpainted glass sample for accurate color representation.

Technical specifications subject to change



Our non-standard colors are based on standard RAL colors with pre-determined color formulations which allow for a faster lead time than custom color matches. Samples are available upon request for a nominal fee.

1000 Green Beige	1014 Dark Ivory	1028 Melon Yellow	2008 Bright Red Orange	3007 Black Red	3027 Raspberry Red
1001 Beige	1015 Light Ivory	1032 Broom Yellow	2009 Traffic Orange	3011 Brown Red	3031 Orient Red
1002 Sand Yellow	1016 Sulfur Yellow	1033 Dahlia Yellow	2010 Signal Orange	3012 Beige Red	4002 Red Violet
1004 Golden Yellow	1017 Saffron Yellow	1034 Pastel Yellow	2011 Deep Orange	3013 Tomato Red	4003 Heather Violet
1005 Honey Yellow	1018 Zinc Yellow	1037 Sun Yellow	2012 Salmon Orange	3014 Antique Pink	4004 Claret Violet
1006 Maize Yellow	1019 Grey Beige	2000 Yellow Orange	3000 Flame Red	3015 Light Pink	4006 Traffic Purple
1007 Daffodil Yellow	1021 Ripe Yellow	2001 Red Orange	3001 Signal Red	3016 Coral Red	4007 Purple Violet
1011 Brown Beige	1023 Traffic Yellow	2002 Vermilion	3002 Carmine Red	3017 Rose	4008 Signal Violet
1012 Lemon Yellow	1024 Ochre Yellow	2003 Pastel Orange	3003 Ruby Red	3018 Strawberry Red	5000 Violet Blue
1013 Oyster White	1027 Curry Yellow	2004 Pure Orange	3004 Purple Red	3020 Traffic Red	5001 Green Blue

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5002 Ultramarine	5013 Cobalt Blue	5024 Pastel Blue	6009 Fir Green	6020 Chrome Green	6033 Mint Turquoise
					
5003 Sapphire Blue	5014 Pigeon Blue	6000 Patina Green	6010 Grass Green	6021 Pale Green	6034 Pastel Turquoise
					
5004 Black Blue	5015 Sky Blue	6001 Emerald Green	6011 Reseda Green	6022 Olive Drab	7000 Squirrel Grey
					
5005 Signal Blue	5017 Traffic Blue	6002 Leaf Green	6012 Black Green	6024 Traffic Green	7001 Silver Grey
					
5007 Brilliant Blue	5018 Turquoise Blue	6003 Olive Green	6013 Reed Green	6025 Fern Green	7002 Olive Grey
					
5008 Grey Blue	5019 Capri Blue	6004 Blue Green	6015 Black Olive	6026 Opal Green	7003 Moss Grey
					
5009 Azure Blue	5020 Ocean Blue	6005 Moss Green	6016 Turquoise Green	6027 Light Green	7004 Signal Grey
					
5010 Gentian Blue	5021 Water Blue	6006 Grey Olive	6017 May Green	6028 Pine Green	7005 Mouse Grey
					
5011 Steel Blue	5022 Night Blue	6007 Bottle Green	6018 Yellow Green	6029 Mint Green	7006 Beige Grey
					
5012 Light Blue	5023 Distant Blue	6008 Brown Green	6019 Pastel Green	6032 Signal Green	7008 Khaki Grey

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7009 Green Grey



7030 Stone Grey



7042 Traffic Grey A



8004 Copper Brown



8022 Black Brown



9006 White Aluminum*



7010 Tarpaulin Grey



7031 Blue Grey



7043 Traffic Grey B



8007 Fawn Brown



8023 Orange Brown



9007 Grey Aluminum*



7011 Iron Grey



7032 Pebble Grey



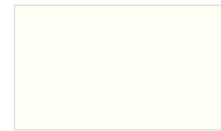
7044 Silk Grey



8008 Olive Brown



8024 Beige Brown



9010 Pure White



7012 Basalt Grey



7033 Cement Grey



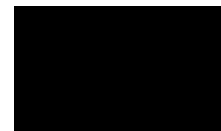
7045 Tele Grey 1



8011 Nut Brown



8025 Pale Brown



9011 Graphite Black



7013 Brown Grey



7034 Yellow Grey



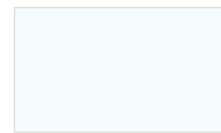
7046 Tele Grey 2



8012 Red Brown



8028 Terra Brown



9016 Traffic White



7016 Anthracite Grey



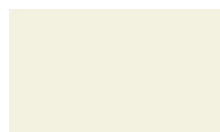
7035 Light Grey



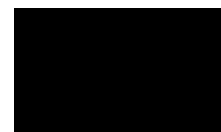
7047 Tele Grey 4



8014 Sepia Brown



9001 Cream



9017 Traffic Black



7021 Black Grey



7036 Platinum Grey



8000 Green Brown



8015 Chestnut Brown



9002 Grey White



9018 Papyrus White



7022 Umber Grey



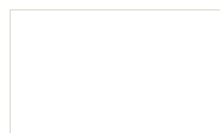
7037 Dusty Grey



8001 Ochre Brown



8016 Mahogany Brown



9003 Signal White

Technical specifications and color availability are subject to change



7023 Concrete Grey



7039 Quartz Grey



8002 Signal Brown



8017 Chocolate Brown



9004 Signal Black

* Additional metallic colors are also available. Please contact Element Designs for color selections.



7026 Granite Grey



7040 Window Grey



8003 Clay Brown



8019 Grey Brown



9005 Jet Black

Color swatches of these printed samples may vary slightly over time, and as such are only to be considered as a guide. Please order an actual backpainted glass sample for accurate color representation.

Technical specifications subject to change

Cleaning Care & Maintenance:

Element Designs' backpainted glass can be cleaned with standard glass cleaners.

For the gloss and/or Satin surface of the glass, we recommend using 99% isopropyl alcohol, citrus or vinegar based cleaners on a clean, non-abrasive cloth or paper towel. If a heavy stain is present and does not come clean using the suggestions above, use isopropyl alcohol with a Mr. Clean Magic Eraser by gently scrubbing until the mark is removed.

For the backpainted water based coating, we recommend using a mildly damp (water only) on a non-abrasive cloth to gently clean the coated side of the glass.

Recommended possible methods for Installation in Vertical Applications:

Backpainted glass bonded to an intermediate substrate:

- Prepare the smooth surface substrate backer panel, the same dimensions as the backpainted glass panel.
- Lightly clean both the substrate and backpainted side with 99% isopropyl alcohol applied to a cloth (do not apply any liquids directly to the water based backpainted coating) and gently wipe the surfaces, clean of debris or any foreign matter.
- Apply 1/2" 3M's VHB to the outside perimeter of the backpainted glass panel (1/2" from the edge) around all sides.
- Insert approximately 15lbs of vertical rolling pressure to the VHB applied to the backpainted glass.
- Using 3M's 760 Caulk (recommend white color), dispense a 1/4" bead of caulk in a wave pattern approximately at a 4" spacing from peak to opposite valley, extending 3" from each top and bottom edge of the glass panel.
- Remove the peel coat on the VHB tape.
- Laminate the backpainted glass with the VHB + Caulk, to the substrate backer.
- Once again, apply 15lbs of vertical rolling pressure to the smooth side of the glass panel to activate the perimeter VHB and to spread the internal caulk application.
- Place a temporary weight across the majority of the laminated backpainted glass to substrate panel for 24 hours.
- Hang the laminated backpainted glass panel to the vertical surface by affixing together.

Backpainted glass bonded directly to vertical surface:

- Lightly clean vertical surface and backpainted side with 99% isopropyl alcohol to a cloth (do not apply any liquids directly to the water based backpainted coating) and gently wipe the surfaces clean of debris or any foreign matter.
- Apply 1/2" 3M's VHB tape to the outside perimeter of the backpainted glass panel (1/2" from the edge) around all sides.
- Insert approximately 15lbs of vertical rolling pressure to the VHB applied to the backpainted glass.
- Using 3M's 760 Caulk (recommend white color), dispense a 1/4" bead of caulk in a wave pattern approximately at a 4" spacing from peak to opposite valley, extending 3" from each top and bottom edge of the glass panel.
- Remove peel coat on the VHB tape.
- Immediately hang the backpainted glass with the VHB + caulk to the vertical surface **using soft pad clamp system at a minimum of four points to add continuous areas of contact to maintain pressure across the backpainted glass panel.**
- Once again, apply the 15lbs of horizontal rolling pressure to the smooth side of the glass panel to activate the perimeter VHB and to spread the internal caulk application in between the clamped stiles.
- Allow 24 hours for the backpainted glass to cure in place, while under pressure of the clamped stiles.

Note to Specifier:

Element Designs' backpainted glass is produced at the highest quality in the market due to our customer's expectations and the vast vertical and horizontal application range of the product. Element Designs only coats low-iron optically clear glass for minimal optical color distortion of the paint through the glass. The paint itself is water based and produces negligible VOCs during production. When designing with Element Designs backpainted glass, please specify: Element Designs, water based paint, low iron glass, flat edge polished, 100% tempered, light grey backer, custom color match capability, negligible VOC content and total opacity to prevent substitutions of inferior painted glass products.

Backpainted Glass – Limited Warranty:

Element Designs warrants the water based backpainted glass product against deterioration or degradation of the color-coated backpainting for a period of five years.

Additional backpainted glass specifications:

Element Designs provides an additional water based coating on the color-coated surface for additional durability and to provide 100% opaqueness. All backpainted glass is coated on low iron glass in 4mm, 6mm 10mm and 12mm thicknesses. Element Designs recommends that the end user review the color choice on the glass thickness for exact color matching prior to placing a production order. Various glass thicknesses can optically distort the backpainted glass color when viewed through the glass.

All Element Designs glass safety-tempered glass unless the panel is less than a 17" diagonal.

The manufactured tempered glass meets the ASTM C-1036 Standard and is subject to permissible defects as defined in the referenced ASTM specification.



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