



Inspection Guidelines for Single Pane and Insulated Glass

EGM Tempering is committed to providing quality products that exceed the industry standards set forth by the ASTM (American Society for Testing and Materials).

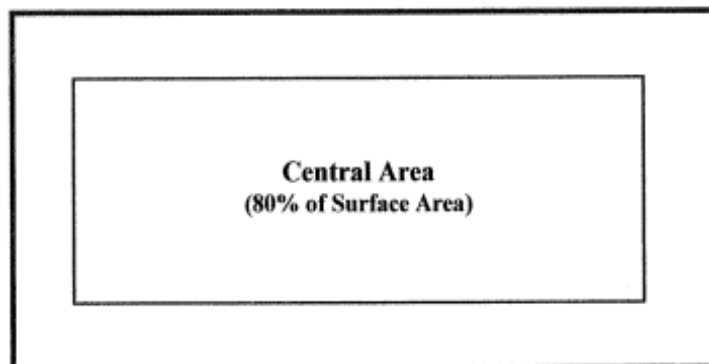
****There is a 24-hour window from receiving product to report any issues. Please email any issues to wholesale@echolsglass.com or call at 678-495-1230****

What is a flaw?

- **Pinhole:** Small hole in the coated surface.
- **Scratch/Rub:** A mark or mar on the glass surface or coating.
- **Chip:** Inclusion with rough surface.
- **Shell (Oyster) Chip:** Smooth/shell-shaped chips.
- **Bow:** Deviation in flatness spanning the entire pane of glass.
- **Fogging:** Moisture or chemical in-between the panes of an IGU.
- **Sightline infringement:** sealant, spacer, or coating deletion extending into the opening of the unit.
- **Edgework:** Seamed using a belt sander, flat polished, beveled, and mitered at an angle.

How to inspect glass:

- Glass should be illuminated by daylight, but not direct sun.
- Clean the glass thoroughly on both sides.
- Stand perpendicular, at 90°, 6 feet away.
- Inspect the center 80% of the glass.
- If any flaws are visible, measure the length/width.



Monolithic/Single Pane/Mirror Standards:

- **Scratch:**
 - Less than 6 ft² - no more than a single 2" scratch allowed.
 - 6 ft² to 35 ft² - no more than two 2" scratches allowed; at least 24" apart.
 - Over 35 ft² - no more than three 2" scratches allowed; at least 24" apart.
- **Pinholes/Dirt/Debris:**
 - Less than 6 ft² - must be 1/16" or less. No more than one allowed.
 - 6 ft² to 35 ft² - must be 1/16" or less. No more than two allowed.
 - Over 35 ft² - must be 1/16" or less. No more than three allowed.
- **Chips/Shells:**
 - No more than 1/8" from the edge. No more than one per side allowed.
- **Tolerance:**
 - 1/8", 3/16", and 1/4" glass will be allowed a tolerance of 1/16" to requested size.
 - 3/8" and 1/2" glass will be allowed a tolerance of 1/8" to requested size.
- **Seamed Edgework:**
 - As is, not a finished product.
- **Bow:**

Glass Thickness	Edge Dimensions											
	0-20"	20-35"	35-47"	37-59"	59-71"	71-83"	83-94"	94-106"	106-118"	118-130"	130-146"	146-158"
	Maximum Bow Allowed											
3/16"	0.12	0.16	0.2	0.28	0.35	0.47	0.5	0.67	0.75	-	-	-
1/4"	0.08	0.125	0.16	0.2	0.28	0.35	0.47	0.55	0.67	0.75	0.83	0.94
3/8"	0.08	0.08	0.08	0.16	0.2	0.24	0.28	0.35	0.47	0.55	0.67	0.75
1/2"	0.04	0.08	0.08	0.08	0.16	0.2	0.2	0.28	0.39	0.47	0.55	0.67

Note. ASTM C1048 – Standard Specification for heat strengthened and fully tempered flat glass, Figure 5.

Insulated Glass Standards:

In addition to the above-mentioned standards:

- **'Kissing:'**
 - Not allowed in warranty. Oversized units or custom muntins void warranty. *See Wholesale Dept. for details.*
- **Sightline infringement:**
 - Up to 1/8" allowed.
- **Fogging:**
 - Not allowed. Covered by warranty.