

WALKER

PRODUCT SPECIFICATIONS



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WALKER TEXTURES®

ACID-ETCHED GLASS AND MIRROR

PRODUCT SPECIFICATIONS

SCOPE

This specification covers the requirements for float glass that has been etched on one or both sides or for acid-etched mirror, and supplied as stock sheets.

GENERAL INFORMATION

The proprietary **Walker Textures®** process uses a controlled solution of hydrofluoric acid to uniformly etch the surface of the glass. Rigorous process control ensures a repeatable uniformity in appearance. Unlike coated glass, the surface is not susceptible to discoloration and cannot delaminate or be scraped off, assuring a consistent appearance over time. Additionally, **Walker Textures®** glass is far less porous than sandblasted glass, making it much more resistant to marring and staining.

PHYSICAL PROPERTIES

Walker Textures® acid-etched glass products are made from selected **float** glass which conforms to the following standards:

USA **ASTM C 1036-16 Standard Specification for Flat Glass**
Quality: Q3 - Stock Sheet

CANADA **CAN/CGSB-12.3-M91 National Standard of Canada – Flat, Clear Float Glass**
Quality: Glazing

Walker Textures® acid-etched mirror products are made from selected mirrors which conform to the following standards:

USA **ASTM C 1503-18 (2018) Standard Specification for Flat Glass Mirrors**

CANADA **CAN/CGSB-12.5-M86 Type 1B National Standard of Canada – Mirrors, Silvered**
(Withdrawal May 2004)

For dimensional tolerances (other than thickness) and edge quality requirements, refer to the specification(s) cited above.

For blemish limits for single-sided* etched glass, please refer to specifications cited above.

**Float glass is normally etched on the “atmosphere” side of the sheet. When tin side etching is required (notably etched mirrors and two-sided etched glass), there is a risk of certain minor defects being present in the etched surface. For more information, please contact customer service.*

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Walker Textures® Transition – True Fade

Hair line scratches caused by the production process might be visible in the transparent areas when inspected at a distance of 3 meters. These isolated imperfections are to be considered acceptable.

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MIRROR SPECIFICATIONS CONFORMITY STATEMENT

Walker Glass mirrors conform to the following two recognized North American standards for mirror.

USA **ASTM C 1503-18 (2018)** Standard Specification for Silvered Flat Glass Mirror

Canada **CAN/CGSB – 12.5 - M86 TYPE 1B** National Standard of Canada for Mirrors, Silvered (Withdrawal May 2004)

Requirements under these standards vary according to product classifications. The following table summarizes the classification applicable to each of Walker Glass' mirror products.

| USA | WALKER GLASS | ASTM C 1503-18 (2018) |
|-----|---|--------------------------|
| | SUBSTRATE | QUALITY CLASSIFICATION |
| | CLEAR MIRROR – 5MM, 6MM | MIRROR SELECT QUALITY |
| | CLEAR MIRROR – 2,3 & 4MM | MIRROR GLAZING QUALITY |
| | TINTED MIRROR (INCLUDING LOW-IRON) ALL THICKNESSES | MIRROR GLAZING QUALITY |
| | | |
| | WALKER GLASS | ASTM C 1503-18 (2018) |
| | SIZE | GRADE CLASSIFICATION |
| | STOCK SIZES LENGTH 120" TO 144" | MIRROR LEHR END GRADE |
| | STOCK SIZES LENGTH BELOW 120" | MIRROR STOCK SHEET GRADE |
| | CUT SIZES | MIRROR CUT SIZE GRADE |
| | | |

| CANADA | WALKER GLASS | CAN/CGSB-12.5-M86 |
|--------|---|---|
| | SUBSTRATE/SIZE | CLASSIFICATION (Withdrawal May 2004) |
| | CLEAR MIRROR – ALL THICKNESSES & ALL SIZES | TYPE 1B – Polished plate or float glass for high-humidity use |
| | TINTED MIRROR (INCLUDING LOW-IRON) ALL THICKNESSES AND SIZES | Not covered under the standard |

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PROPERTIES AND PERFORMANCE CHARACTERISTICS

ACID-ETCHED GLASS AND MIRROR STOCK SHEETS

Stock sheets of all **Walker Textures®** products are uniformly etched over the entire surface of one or both sides, except for a $\frac{3}{4}$ " (20mm) unusable border on all four sides, except for Low-E coated acid-etched glass products for which the unusable border is 1". Variances in opacity within a sheet will be indistinguishable to the naked eye when viewed under normal viewing conditions.

For specific properties and performance data, please consult the following tables:

Physical Properties

Table A1 - Glass thickness values

Table A2 - Strength properties

Table A3 - Resistance properties

Table A4 - Coefficient of friction values (**Walker Textures® Traction**)

Light and Energy Performance Values

Table B1 - Light and energy performance values

Table B2 - Daylight diffusion properties

Values for substrates not listed in above tables may be available upon request.

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**TABLE A1
ACID ETCHED GLASS THICKNESS RANGE**

| Float Glass Nominal Designation | Thickness Range for Opaque Acid-etched Products | | Thickness Range for Velour Acid-etched Products | | Thickness Range for Satin Acid-etched Products | | Thickness Range for Satinlite Acid-etched Products | |
|---------------------------------------|--|-------|--|-------|---|-------|---|-------|
| | mm | | mm | | mm | | mm | |
| | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. |
| 3 mm | 2.92 | 3.40 | 2.92 | 3.40 | 2.84 | 3.32 | 2.74 | 3.22 |
| 4 mm | 3.78 | 4.19 | 3.78 | 4.19 | 3.70 | 4.11 | 3.60 | 4.01 |
| 5 mm | 4.57 | 5.05 | 4.57 | 5.05 | 4.49 | 4.97 | 4.39 | 4.87 |
| 6 mm | 5.56 | 6.20 | 5.56 | 6.20 | 5.48 | 6.12 | 5.38 | 6.02 |
| 8 mm | 7.42 | 8.43 | 7.42 | 8.43 | 7.34 | 8.35 | 7.24 | 8.25 |
| 10 mm | 9.02 | 10.31 | 9.02 | 10.31 | 8.94 | 10.23 | 8.84 | 10.13 |
| 12 mm | 11.91 | 13.49 | 11.91 | 13.49 | 11.83 | 13.41 | 11.73 | 13.31 |
| 15 mm | 15.09 | 16.66 | 15.09 | 16.66 | 15.01 | 16.58 | 14.91 | 16.48 |
| 19 mm | 18.26 | 19.84 | 18.26 | 19.84 | 18.18 | 19.76 | 18.08 | 19.66 |

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TABLE A2
ACID-ETCHED GLASS STRENGTH PROPERTIES

| Test/Standard | | 6mm Satin Tempered | | 6mm Unetched Tempered | |
|--------------------------|-----------|---------------------------|-----------------------------|-----------------------|------------------------|
| Modulus of Rupture | ASTM-C158 | Etched Surface in Tension | Unetched Surface in Tension | | |
| Max Load (pounds) | | 357 | 351 | 338 | Higher number = better |
| Flexural Strength | | 1.07 | 1.05 | 1 | Higher number = better |
| Modulus of Rupture (psi) | | 28720 | 28370 | 26720 | Higher number = better |

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TABLE A3
ACID-ETCHED GLASS AND MIRROR RESISTANCE PROPERTIES

| Test/Standard | | Opaque (**) | Velour (*) | Satin (**) | Satinlite (*) | Float | Unit of Measure | |
|-------------------------------|------------|-------------|------------|------------|---------------|--------|--------------------------|------------------------|
| Resistance to Wear | ASTM-C501 | 213 | 210 | 198 | 214.86 | 183.29 | Abrasive Wear Index (Ix) | Higher number = better |
| Resistance to Staining | ASTM-C1378 | A | A | A | A | A | Classification | Higher number = better |
| Scratch Hardness | MOHs | 5 | 5 | 6 | 7 | 5.5 | Out of possible 10 | Higher number = better |

(*) Acid-etched Glass Only

(**) Acid-etched Glass & Mirror

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**TABLE A4
COEFFICIENT OF FRICTION VALUES - TRACTION PRODUCTS**

| Test/Standard | | Pattern 406 | Pattern 407 | Force |
|--|---------------------------------|-------------|-------------|-------|
| Procedure Dynamic Coefficient of Friction (DCOF) | ANSI A137.1-2012 Section 9.6 | 0.67 | 0.66 | 0.56 |

Note: ANSI A137.1 2012 specifies 0.42 DCOF or BETTER measured with the BOT 3000 for level interior spaces expected to be walked upon when wet.

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**TABLE B1
ACID-ETCHED GLASS
LIGHT & ENERGY PERFORMANCE VALUES**

| Monolithic Unit Performance ¹ | | | | VISIBLE LIGHT ² | | | TOTAL SOLAR ENERGY ² | | | UV ² | | | SC ³ | SHGC ⁴ | LSG ⁵ |
|--|----------------|-----------------|-------------------|----------------------------|---------------|---------------|---------------------------------|---------------|---------------|-----------------|---------------|---------------|-----------------|-------------------|------------------|
| SURFACE FINISH | # ETCHED SIDES | GLASS SUBSTRATE | THICKNESS mm (in) | Transmittance | Reflectance 1 | Reflectance 2 | Transmittance | Reflectance 1 | Reflectance 2 | Transmittance | Reflectance 1 | Reflectance 2 | | | |
| Opaque | 1 | Clear | 6mm (1/4") | 91% | 7% | 9% | 80% | 7% | 8% | 66% | 6% | 8% | 0.96 | 0.84 | 1.08 |
| Velour | 1 | Clear | 6mm (1/4") | 91% | 8% | 8% | 82% | 7% | 7% | 67% | 7% | 7% | 0.98 | 0.85 | 1.07 |
| Satin | 1 | Clear | 6mm (1/4") | 89% | 8% | 8% | 79% | 7% | 7% | 64% | 7% | 7% | 0.96 | 0.83 | 1.07 |
| Satinlite | 1 | Clear | 6mm (1/4") | 88% | 8% | 8% | 80% | 7% | 8% | 64% | 6% | 5% | 0.96 | 0.84 | 1.05 |
| Opaque | 1 | Starphire | 6mm (1/4") | 93% | 6% | 8% | 90% | 6% | 8% | 90% | 6% | 8% | 1.04 | 0.90 | 1.02 |
| Velour | 1 | Starphire | 6mm (1/4") | 92% | 8% | 8% | 89% | 7% | 7% | 88% | 8% | 8% | 1.04 | 0.90 | 1.02 |
| Satin | 1 | Starphire | 6mm (1/4") | 90% | 8% | 8% | 88% | 8% | 8% | 86% | 8% | 8% | 1.03 | 0.89 | 1.01 |
| Satinlite | 1 | Starphire | 6mm (1/4") | 90% | 8% | 8% | 89% | 8% | 8% | 87% | 6% | 5% | 1.03 | 0.90 | 1.01 |

Notes

- Figures may vary due to manufacturing tolerances. All tabulated data is based on NFRC methodology using the LBNL's Window 5,2 software.
- Transmittance and reflectance values based on spectrophotometric measurements and energy distribution of solar radiation.
- Shading coefficient is the ratio of the total amount of solar energy that passes through a glass relative to 1/8-in. (3.0 mm) thick clear glass under the same design conditions. It includes both solar energy transmitted directly plus any absorbed solar energy re-radiated and converted. Lower shading coefficient values indicate better performance in reducing summer heat gain. Shading coefficients at outdoor air temperature of 89° F (32° C), outdoor air velocity of 7.5 mph (3.4 m/s), indoor air temperature of 75° F (24° C), indoor air velocity of 0 mph (0 m/s) and solar intensity of 248 BTU /hour/square foot (783 w/m2).
- Solar Heat Gain Coefficient (SHGC) represents the solar heat gain through the glass relative to the incident solar radiation. It is equal to 86% of the shading coefficient.
- Light to Solar Gain (LSG) ratio is the ratio of visible light transmittance to solar heat gain coefficient.
- Values are for indication purposes only and are subject to variation according to conditions of measurement, manufacture and/or application.
- For *Walker Textures*® *Nuance* & *AviProtek*® product lines, values indicated above may change depending on the pattern type.

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**TABLE B2
ACID-ETCHED GLASS
DAYLIGHT DIFFUSION PROPERTIES**

Test/Standard: ASTM D1003-13

| Acid-etched Finish | Glass Substrate | Thickness mm (in) | Total Luminous Transmittance | Diffuse Transmittance | Haze |
|--------------------|-----------------|-------------------|------------------------------|-----------------------|--------|
| Opaque | Clear | 6mm (1/4") | 82.50% | 75.09% | 90.73% |
| Velour | Clear | 6mm (1/4") | 88.44% | 79.00% | 89.30% |
| Satin | Clear | 6mm (1/4") | 72.75% | 32.66% | 44.89% |
| Satinlite | Clear | 6mm (1/4") | 75.41% | 9.73% | 12.90% |

Total Luminous Transmittance is the ratio of transmitted light to the incident light and is influenced by the absorption and reflection properties.

Diffuse Transmittance is the portion of light that is scattered or diffused by the glass surface.

Haze is the percentage of light which in passing through deviates from the incident beam greater than 2.5 degrees on the average. Haze is equal to the diffuse transmittance divided by the total luminous transmittance.

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