

GUIDELINES FOR HANDLING, FABRICATION, INSTALLATION, AND CLEANING



TRANSPORTATION, RECEIVING & STORAGE

- Before unloading the truck, verify the weight of the cases/stoces and confirm that the handling equipment is adequate.
- Check your shipments on arrival. If there appears to be moisture present, the sheets should be unpacked and allowed to dry using a separating technique. Do not allow sheets to remain in contact with wet protective pads.
- Be sure that your storage areas are dry, adequately ventilated spaces. Don't store sheets in areas of high humidity, where exposed to chemical fumes, or near high heat such as steam or water pipes. These conditions can promote staining.
- Do not store sheets outdoors or in unheated areas.
- Sheets should be unpacked as soon as possible to allow moisture caused by condensation to dissipate, especially if the sheets have been subject to temperature changes during shipment.
- Block the cases/stoces up off the floor to prevent any water damage to the bottom of the sheets. Also, do not store crates or sheets on uneven surfaces. This can lead to stresses on the sheets which can cause cracks or breakage.
- Store sheets vertically. Do not lay sheets flat. Even minor movements in a flat stack will cause abrasion if not breakage.
- When removing sheets from the case, separate them from the pack one at a time before removal.
 Never slide a sheet across the one behind it.
- Always handle sheets one at a time.
- Do not move or reship partially unpacked cases without proper repacking. Movement within the case can cause damage or breakage.
- If sheets are transported in an open or exposed condition and become spattered or come in contact with foreign elements such as road salt, they should be washed and dried immediately.



CUTTING, FABRICATION AND CLEANING

- Always use gloves when handling sheets.
- When handling sheets with suction cups, apply cups to the unetched side. If this is not possible, extra care should be taken to ensure that the cups are clean and free of dust. Then test thoroughly for proper vacuum before lifting.
- Vacuum or sweep the cutting tables with a stiff brush regularly to keep dust down and to eliminate glass grit and particles which could scratch sheets.
- Walker Textures® acid-etched glass sheets are cut most easily by scoring the unetched side. When
 cutting etched mirrors or glass which is etched on both sides, the etched surface can be scored,
 however, increased cutting pressure is required. When scoring on the etched surface, cutting
 pressure should be tested prior to cutting stock sheets.
- Pieces should be washed after cutting to avoid possible staining from cutting oil.
- **Walker Textures**® acid-etched glass may be susceptible to marking during machine-edging if proper care is not taken. For best results, follow these simple recommendations:
 - Ensure that the machine's gripping pads have been scrubbed clean.
 - Verify that the speeds of the front and back conveyors are identical
 - · Check the glass thickness with a micrometer and adjust gripping pressure accordingly
 - Wet the glass before fabrication
 - · Wash glass immediately after fabrication
- Never allow coolant or cerium oxide to dry on the glass, as it may become a permanent stain on the etched surface.
- **Walker Textures**® acid-etched glass may be machine-washed or washed by hand using clean, lint-free cloths for washing and drying. Detergents or glass cleaners may be used and will not be harmful to the glass, provided that all residue is removed and that the glass is thoroughly dried.

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CUTTING, FABRICATION AND CLEANING (Cont.)

WARNING - TO USERS OF AUTOMATED PROCESSING EQUIPMENT

A majority of the automated glass processing equipment made today, notably cutting tables, utilise optical sensors to locate the glass sheets. Due to the diminished reflectivity of an acid-etched glass surface, certain optical sensors may have difficulty in reliably detecting the position of the glass. False readings from the sensors can result in damaged glass, damaged equipment and possibly even injury to operators. It is very important to test all of the optical sensors on processing equipment before beginning production with acid-etched glass.

Most optical sensors can be adjusted for sensitivity. In the event that a sensor is unable to accurately detect the glass, contact the equipment manufacturer for information on how to adjust the sensitivity. In some cases, the range of sensitivity may be too limited. In this case, the sensor may need to be changed. The equipment manufacturer should be able to provide an alternative sensor compatible with their equipment.

It is also important to note that a single sensitivity setting may not be suitable to all glass substrates. It may be necessary to reset the sensitivity to a lower setting for unetched glass, once etched glass processing is completed.

SPECIAL NOTE – *Walker Textures*® acid-etched glass products are to be considered as having a somewhat porous surface when compared to regular float glass. Should there be any requirement to apply products such as adhesives or markers to the etched surface **temporarily**, testing must be done beforehand to ensure removal is possible. We also recommend a thorough verification following removal of the product, to ensure complete removal has been fully achieved without any noticeable alteration of the acid-etched surface.

Since there are many variations in chemical formulations of these products, we cannot list every product or brand that may or may not be applied to the surface. Here however, are a few of the products which may cause some problems and should be avoided or evaluated beforehand:

Silicone adhesives, mastics, black felt markers, wax markers, oil or grease.



TEMPERING, LAMINATING AND INSTALLATION

- Walker Textures[®] acid-etched glass may be tempered in the same manner as unetched glass.
 However, when edging glass prior to tempering, it is important to follow the Walker Textures[®] fabrication guidelines.
- **Walker Textures**® acid-etched glass may be laminated in the same manner as unetched glass providing that the laminate is applied to the unetched surface.

WARNING: Draw lines, inherent in the float process, are usually invisible to the naked eye. However, draw lines may become visible when etched glass is laminated to reflective or opacified substrates such as mirror or painted glass. As float glass manufacturers assume no liability for glass within specification that may contain draw lines, Walker Glass does not warrant against draw lines which become visible after lamination of etched glass to reflective or opacified substrates. Laminators are advised to conduct visual inspection of the two substrates together prior to lamination.

- Walker Textures® acid-etched mirror may not be tempered or laminated.
- **Walker Textures**® acid-etched glass and mirror may be installed in the same manner as unetched glass and mirror, following normal industry installation standards and appropriate codes.

LOW-E COATED ACID-ETCHED GLASS

Please note that *Textures*[®] glass products with a Solarban[®] coating must be fabricated no later than 90 days following delivery date.



MIRROR INSTALLATION GUIDELINES

The best mirror job is one that is not only striking in appearance, but one that was trouble-free during installation. Proper techniques, carefully and professionally employed, can virtually guarantee this kind of result.

- Always use gloves when handling any mirror to prevent damage to the face or backing from skinborne salts or chemicals.
- Never install mirrors on new plaster, new masonry or on a freshly painted wall without proper sealing. Also, do not install in any new construction area where airborne solvents or heavy-duty cleaners or chemicals are in the air.
- Never install mirrors outdoors without additional engineered protection for the backing of the mirror.
- The mirrors should have breathing space behind them when installed to prevent moisture entrapment, both during and after installation.
- Never install a mirror in contact with a splash board or sink back. Insist on at least 10mm of space between the bottom edge of a mirror and other surfaces. This will prevent moisture entrapment and permit drainage.
- Whenever possible, use mechanical means of installation, such as J-mouldings, clips and screws, or framing, in preference to tapes, adhesives, mastics, etc. J-moulding should have weep holes. Mirrors should always have a 3mm neoprene setting pad between the mirror and clip or moulding used.
- If mechanical means are not acceptable or practical, carefully choose the adhesive system you will use. Be sure materials selected are compatible with the mirror backing. Avoid using materials with strong, harsh, or corrosive solvents or acids. Acetones, toluols, methylene chlorides, acetic acids, or acids of any nature can severely damage mirror backings.
- When adhesives are used, do not apply dollops of material, when placed against a wall they will flatten to a larger, pancake-size diameter. Perimeters or diameters will dry relatively fast. This normally causes solvent or curing additives to be trapped centrally, as well as potential chemical attack of the mirror; this can detract from overall adhesive strength.
- Adhesives should be applied in a straight line with 10mm to 12mm width beads. Beads should be vertical when installed. Do not loop or criss-cross beads. Looping or criss-crossing causes entrapped areas that prevent venting. Vertical application assures that either heavier than air or lighter than air fumes can escape.
- Caulking gun application is ideal. It allows adhesive application without mechanical contact
 of mirror backing with trowels, putty knives, etc. This minimizes scratch potential. Powered feed
 guns are available for cartridges, pails, and drums of adhesives.

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MIRROR INSTALLATION GUIDELINES (Cont...)

- Cleaning of installed mirrors is also very important. Solid soils such as paint, excess edge sealant, felt buttons, tape, or adhesives should be razor-bladed off. Cleaning solutions should be mild, and preferably not contain ammonia, vinegar, bleaches or solvents. Cleaning solutions should be used to dampen the wiping cloth. Do not spray directly on mirror. Spraying directly on a mirror can allow material to run down and provide a source of edge contamination.
- Be sure to provide cleaning instructions for the new owner or the housekeeping staff after installation.
- New owners should also be advised of the need for proper ventilation and/or air conditioning in environments of high temperature and humidity.



COMPATIBILITY OF ADHESIVES WITH OUR MIRRORS

Walker has not directly carried out any compatibility testing for any specific adhesives. We, instead, rely on a large body of information from our customers, who regularly use adhesives to install our mirrors. The adhesives most commonly used by our customers to install our mirrors are the mirror mastics manufactured by Palmer and Gunther and the neutral-cure silicone adhesives manufactured by companies such as GE and Dow-Corning. Based on the vast quantities of Walker mirror installed with the above-mentioned adhesives over several decades, we are comfortable in calling all of these adhesives "compatible" with Walker mirrors. Compatibility notwithstanding, we feel it important to remind you that there do remain risks in applying any adhesive to a mirror backing. These risks fall into three main categories.

- 1) CHEMICAL LEACHING from adhering mirrors to unsealed substrates
- 2) INCOMPLETE SOLVENT EVAPORATION from solvents trapped in the center of applied adhesive
- 3) EXCESSIVE SOLVENT quantity/concentration found in certain batches of adhesives

In order to guard against these risks, we recommend that the following important precautions always be taken when installing mirrors with adhesives.

- Never install mirrors on new plaster, new masonry or on a freshly painted wall without proper sealing. Also, do not install in any new construction area where airborne solvents or heavy-duty cleaners or chemicals are in the air.
- When adhesives are used, do not apply dollops of material. When placed against a wall they will flatten to a larger, pancake-size diameter. Perimeters or diameters will dry relatively fast. This normally causes solvent or curing additives to be trapped centrally. As well as potential chemical attack of the mirror, this can detract from overall adhesive strength.
- Adhesives should be applied in a straight line with 10mm to 12mm beads. Beads should be vertical when installed. Do not loop or criss-cross beads. Looping or criss-crossing causes entrapped areas that prevent venting. Vertical application assures that either heavier than air or lighter than air fumes can escape.



POST INSTALLATION CLEANING AND MAINTENANCE

To prevent permanent damage and maintain visual and aesthetic quality, acid-etched glass products should be protected during construction and must be properly cleaned after installation and as part of routine maintenance.

As dirt and residue appear, acid-etched glass surfaces should be thoroughly cleaned. If the glass is extremely dirty, as a result of recent construction activity for example, the glass surfaces should be soaked with clean water and mild soap solution to loosen dirt or debris. Following the initial soaking of the glass, normal cleaning procedures should be followed. Professional glass and window cleaners are recommended for cleaning decorative glass products in lieu of construction site workers.

When the glass requires normal maintenance, use a mild, non-abrasive solution and uniformly apply the solution to the glass surfaces with a soft, non-abrasive applicator (e.g. thick cloth or sponge). Immediately dry the glass surface with a lint-free cloth.

In addition, here are some key recommendations:

- Clean a small area of the glass first. Check to see if procedures have caused any damage
- Do not use razor blades or other scrapers for cleaning decorative glass
- Do not allow dirt and residue to remain on glass for an extended period of time
- Do not allow metal parts of cleaning equipment to contact the glass
- Caution other trades against allowing other materials to contact the glass
- Watch for and prevent conditions that can damage the glass



CLEANING INSTRUCTIONS FOR USING WALKER TEXTURES® SATINLITE AS A WRITING SURFACE

- It is recommended to use only dry erase markers for easier maintenance
- Wipe away dry erase marker writing using an eraser or dry cloth
- Clean or replace eraser or cloth frequently
- Clean the writing surface (Satinlite side) periodically with a standard glass cleaner. The frequency of the required maintenance is based on actual usage
- In order to maintain appearance and for simpler cleaning, it is not recommended to use permanent markers; however, if used, clean promptly with a standard glass cleaner to inhibit ghosting.
- For additional technical assistance, please contact our Customer Service Department