

# TRU-AR™ Care and Handling Guide

## PRODUCT DESCRIPTION

TRU-AR™ products consist of in-line sputtered anti-reflective (AR) coatings applied to either soda lime/clear float or low iron glass. The AR coatings can be applied to either one or both sides of the substrate, and the finished product can be laminated, annealed, or tempered.

TRU-AR™ coatings bring the reflection of each surface down from over 4% to less than 0.5%, resulting in optimal light transmission and superior clarity. The coatings also offer an enhanced surface for better durability and easy cleaning and are produced within extremely tight cosmetic specifications.

## PRODUCT RANGE

TRU-AR™ comes in 3mm and 6mm single sided anti-reflective coating for laminate and 9.5mm double sided anti-reflective coating for temperable products. Both are available in either clear float or low iron substrates.

Product	Substrate	Thickness	Size	Lite Quantity	Application
TRU-AR™ SS CFL	Clear Float	3mm and 6mm	96" x 130"	10 Lites (3mm), 5 Lites (6mm)	Laminate
TRU-AR™ SS LI	Low Iron	3mm and 6mm	96" x 130"	10 Lites (3mm), 5 Lites (6mm)	Laminate
TRU-AR™ DS CFL	Clear Float	9.5mm	96" x 130"	5 Lites (9.5mm)	Temperable
TRU-AR™ DS LI	Low Iron	9.5mm	96" x 130"	5 Lites (9.5mm)	Temperable

## DELIVERY & STORAGE

Packaging: Tru-AR lites will be packaged in A-frame crates and shipped LTL.

When unloading TRU-AR™ products, avoid jarring or sudden movement to prevent shifting of the load and potential damage to the lites. Also, store TRU-AR™ products in a dry, well-ventilated area and avoid drastic temperature changes to prevent condensation that may lead to staining. If possible, store TRU-AR™ product in the original packaging in an upright position. Otherwise, store the TRU-AR™ product in an upright position on to soft/ durable material (i.e. wood) strips to prevent product edge damage

## HANDLING

Glass should be treated with care when handling any product in the TRU-AR™ portfolio. To avoid injury and fingerprints, proper personal protective equipment (PPE) including gloves should be worn. Gloves should be clean, inspected, and changed at regular intervals.

Avoid dragging the lites of glass against or across one another when removing from the packaging. Any forms of glass identification, especially ones with adhesive, shall be applied to the uncoated surface. Do not slide the lites of glass into place. Lift it up to adjust and reposition to avoid scratching. All equipment used for transferring the glass must be in optimal condition: Air tables, rollers, wheels, belts, etc.

While processing the individual lites, material handling equipment must be free of debris and capable of smooth motion while moving the material to avoid damage to the product and coating. If suction cups are used, contact the non-coated side, as much as possible. Suction cup covers/protectors are recommended to prevent scratching and marking of the product.

When manually handling the glass, use clean and dry glass handling gloves to avoid leaving fingerprints or otherwise contaminating the coated surface. Aprons or clean Kevlar should be worn to protect the coated surface from any contact with abrasive materials, which can cause damage to the coating. Operators should be trained that any contact of hard or abrasive materials on the coated surface may result in damage or scratches.

All of Tru Vue glass products are clean and ready to use. If spot cleaning is needed, use the following techniques: Place the glass on a clean, non-abrasive surface for cleaning. Use a clean, soft, lint-free cloth to clean the glass. Tru-Vue recommends using a micro-fiber cloth. Spray a small amount of ammonia-free cleaner (Isopropyl Alcohol - IPA) onto the cloth. Spraying on the cloth will prevent overspray. Press the cloth against the glass and clean in round, circular motions.

During internal transporting cut size sheets, the glass must be protected, and a form of separation must be used. Lucite should be used if the glass is being washed following transport. Clean, non-alkaline paper or cardboard strips can also be used to prevent transit damage to the coating surfaces. Separating pads can be used but should be applied to the non-coated surface when possible. Harp racks may also be used if they are clean, in good condition, and do not allow any contact to abrasive surfaces.

## CUTTING

For TRU-AR™ products, care must be taken to ensure that, wherever the product surface touches the cutting table, the surface is thoroughly clean and free of debris or any material or feature that may cause damage to the product surface. Tru Vue recommends using automated cutting equipment if possible with cutting oil that evaporates quickly to minimize residue. If performing manual cutting on TRU-AR™ product, use extreme care to avoid damaging the product surface with the tools used (i.e. tape measure, straight edges, cutting tools). Tru Vue recommends using the same quickly evaporating cutting oil on the score line prior to breakout.

## WASHING

If machine washing, the washer should be designed with an integrated, continuous conveyor. Tru Vue recommends the following set up:

- Pre-rinse: Soft water with a high-pressure water temp of 90°F
- Wash Sections: Deionized water with a conductivity of  $30 \leq \mu\text{S}/\text{cm}$  and a PH level of 7.0
- Final rinse: Deionized water with a conductivity of  $10 \leq \mu\text{S}/\text{cm}$
- In the wash section and final rinse, water temperature of 105–120°F
- Use a .15mm soft bristle cylindrical brushes.

**Note:** Washing machines originally not intended for washing coated glass may need to be reconfigured or modified to achieve the desired level of cleanliness.

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- Use a clean, soft, lint-free cloth to clean the glass. Tru Vue recommends using a micro-fiber cloth.
- Spray a small amount of ammonia-free cleaner onto the cloth. Spraying on the cloth will prevent overspray.
- Press the cloth against the glass and clean in round, circular motions.

**Note:** After cleaning and before assembling, careful inspection of the antireflective coating is critical to identify any debris, residue or foreign. If discovered, please use the recommended cleaning directions.

## HEAT-TREATING / TEMPERING

Tru Vue's TRU-AR™ products can be heat-strengthened or tempered after they are cut to size. The following are recommended best practices for the tempering process:

- All surfaces should be clean and free of contaminants and fingerprints.
- When tempering single-sided product, the coated side should face upwards.
- Initial furnace settings can be set according to uncoated glass of the same dimensions and adjusted based on performance.
- Samples should be re-inspected after tempering for distortion or any other cosmetic defects.

## PRODUCT INSPECTION (APPEARANCE)

Upon receipt of the TRU-AR™ product, Tru Vue recommends performing inspection of the product and report any defects to Tru Vue before using the product. Defect claims identified after processing of the TRU-AR™ product will not be accepted by Tru Vue since the customer is responsible for inspection of the TRU-AR™ product at incoming and during processing.

For defective claims, Tru Vue requires the customer to provide the batch number and samples. The inspection viewing distance is 3 meters, and it is acceptable to see slight mottling of coating. Please keep in mind that natural process variation may lead to minor color variations between production runs at Tru Vue, so adjacent lites may show slight differences and are considered acceptable by Tru Vue.