

Architectural Fusions Care & Maintenance

Includes Altyno, Belbien, Di-Noc, Reatec & LX (LG) Interior Films

In most all cases, the stains can be easily cleaned off by using a non-abrasive household cleaner such as dishwashing liquid. In other cases, a solution of denatured alcohol will generally remove the stain. For severe stains, it is possible to use lacquer thinner or acetone in some instances.

Note: It is highly advisable to test any strong solvent's compatibility with the fusion in an inconspicuous area prior to applying the solvent to a visible area. Read the following topics for solvent resistance. **It is important to refrain from using abrasive cleaners on any vinyl fusion because it could damage the surface.**

Custom Printed Graphic Architectural Fusions

It is recommended to clean printed films with a damp rag using water. If a cleaning solution is needed, a non-abrasive cleaner such as Windex or dishwashing liquid should be used. **Use of harsh or abrasive chemicals such as denatured alcohol may damage the printed image.**

Solvent Resistance

The exterior series is more resistant to strong solvents than the Interior series. This is because of an anti-corrosive film layer that is incorporated with the exterior series.

The anti-corrosive film layer is comparable in nature to the makeup of fluoride or Teflon. However, it is important to refrain from making a "direct comparison" because they are somewhat different.

The following solvents were exposed to the exterior series and appreciable change was observed.

- Toluene
- MEK (Methyl Ethyl Ketone)
- Acetone

**If you have any questions regarding care or maintenance of the Fusions product,
please contact Surfacequest Solutions at 952-835-2880**

Altyno General Product Specifications

Description: an architectural decorative film with pressure sensitive adhesive and release paper

Material: PVC (polyvinyl chloride)

Width (film width = effective pattern width): 1,220mm (48 inches)

Thickness (film + adhesive): approximately 0.2mm (8 mil or 0.008 inches)

Regular Full Roll Length: 50m (54.68yards, 164feet)

Splice: Maximum two splices allowed in one 50m roll with 3m per splice compensation material

Roll Core Material: cardboard

Regular Full Roll Packing: in a cardboard box suspended with plastic end caps

Regular Full Roll Box Dimensions: 1,264mm x 236mm x 242mm (49.8 inches x 9.3 inches x 9.5 inches)

Regular Full Roll Box Weight: approximately 28 kilograms (61.7 pounds)

Fire and Smoke Ratings

All Altyno items listed in this sample binder are Class A in accordance with ASTM E-84 tests conducted by an ASTM accredited testing facility in the United States.

(Note: The ASTM tests were conducted for single layer application test samples only.)

Check with local building code authority to verify Class A in accordance with ASTM E-84 is sufficient for a specific application.

Air-Release Adhesive System Feature

All Altyno items listed in this sample binder have an air-release adhesive system to make installation more efficient than conventional adhesive systems without air-release.

Cautions and Recommendations

Read the following Cautions and Recommendations carefully and thoroughly, as violation of and/or deviations from these Cautions and Recommendations may limit or void the Altyno Product Warranty.

<Environment and Maintenance>

Interior Use Only: All Altyno items listed in this sample binder are for interior use only.

UV Exposure: Avoid UV exposure. For example, solar control window films may be necessary to prevent UV exposure through windows.

Water Exposure: Avoid continuous water exposure.

Chemical Exposure: Avoid chemicals and cleaning substances that cause appreciable appearance change and/or unacceptable characteristic change. Refer to Altyno Sample Test Reference Data Section. It is recommended to conduct a small sample test for a specific cleaning substance under consideration.

Extreme Temperatures (Post Installation): Avoid extreme temperatures, continuously lower than -10°C (14 °F) and/or continuously higher than/equal to 50°C (122 °F).

Cleaning (Surface Maintenance): Keep installed Altyno surface clean and dry. Use commercially available neutral detergent to clean Altyno surface. (Avoid using alkaline detergent, acid detergent, and/or organic solvent such as paint thinner.) Use soft cloth and/or soft sponge, etc., to clean/wipe Altyno surface. Do not use sponge containing abrasion agents. Completely remove/wipe off detergent residue from Altyno surface after cleaning.

<Application>

Substrate Type: Substrates must be smooth, solid, and non-porous, such as high-pressure laminates and metals. It is recommended to utilize AICA-KIUSA Certified Installers to evaluate the substrates. Direct installation on drywall is not recommended. However, it is possible to utilize other substrates over the drywall, such as Sintra and melamine board, instead of installing Altyno directly on drywall.

Substrate Shape: Avoid three-dimensional installation that requires heat stretching. Avoid folding Altyno. Use caution when wrapping Altyno around very sharp edges.

Substrate Preparation: Substrate preparation, including but not limited to surface cleaning, before installing Altyno is a critical process for successful Altyno installation. It is recommended that substrate is prepared by AICA- KIUSA Certified Installers or under supervision of an AICA- KIUSA Certified Installer.

Color Variation: It is possible for different printing lots to have slight color variation or emboss variation; therefore, if a purchase order requires the same printing lot, it must be specified at the time the purchase order is placed.

Pattern Direction: Altyno has a specific pattern print direction; therefore, utilize the "Altyno" logo printed on the release paper to install pattern directions uniformly

Pattern Repeat: Altyno has horizontal and vertical print pattern repeats. However, all printed patterns represent natural aesthetics, such as wood grains; therefore, it is not industry standard to match pattern repeat.

Scratch Resistance: Scratch resistance varies among patterns and embosses; therefore, use caution to select the pattern suitable for the application. It is recommended to utilize KIUSA Authorized Dealers and/or AICA-KIUSA Certified Installers for advices on specific applications. If Altyno's scratch resistance is not sufficient, consider Melatack Plus for applications that require higher scratch resistance, for example horizontal surfaces such as counter tops, table tops, and desk tops. (Note: Melatack Plus's minimum order is 200 of 4'x8'sheets on a pallet shipped from Japan.)

Question: For any questions or concerns regarding the use of or applications of Altyno, contact the US Importer and Distributor, Koike Imatecs USA, Inc..

<Receiving Inspection and Storage>

Material Receiving Inspection: Perform material receiving inspection and have delivery personnel officially record any visible shipping damage to maintain right to file shipping damage claim against a shipping carrier. Conduct Altyno product inspection, and notify the seller from which Altyno was directly purchased if there is any product damage.

Pre-Installation Storage: Altyno must be stored in a climate controlled facility to maintain shelf life. Storage conditions are temperatures between 0°C (32 °F) and 38°C (100 °F), and relative humidity less than 70%. Store Altyno rolled with release paper inside on a core in a plastic bag, suspended between two end caps in an Altyno shipping box. Altyno boxes must be stored in a horizontal position, and if stacked must be stacked in a way that the box ends (meaning the end caps) are aligned and bear weight. The maximum number of Altyno boxes that can be stacked is 4 boxes high. Avoid direct sunlight on the box during storage.

In order for Altyno Product Warranty to be effective, Altyno must be installed within 3 months from the receiving date.

<On-Site Evaluation and Installation>

It is recommended to conduct on-site evaluation by KIUSA Authorized Altyno Installing Dealers to confirm proper application and installation requirements. Also, it is strongly recommended to only use AICA-KIUSA Certified Installers for installation.

Altyno Sample Test Reference Data (Not Warranted)

AICA has performed sample tests and provide the following information for reference purposes only. AICA does not warrant that products as delivered confirm to the test data provided below or to any samples or other sample test data that may be provided.

Altyno Environmental Resistance Sample Tests

Test Name	Test Method	Test Results
Dimensional Stability	Cross-Shape Cut Opening on Altyno Sample on 100mm(3.9in) Square Aluminum Board, after keeping at 65°C (149 °F) for 48 hours.	≤0.3mm(0.012in)
Abrasion Resistance	End Point on Altyno Sample by Taber Abrasion Test CS-17 with 1kg(2.2 Lb) Weight	≥5,000 Rotations
Heat Resistance	Adhesion Strength Observed on Altyno Sample on Aluminum Board, after keeping at 65°C (149 °F) for 28 days.	No Abnormality
Moisture Resistance	Adhesion Strength Observed on Altyno Sample on Aluminum Board, after keeping at 65°C (149 °F) for 28 days.	No Abnormality
Sunlight Resistance	Observation on Altyno Sample after 250 hours by Sunshine Weather-Meter.	No Significant Change
Environmental Temperature	Peeling and Discoloration Observation on Altyno Sample on Aluminum Board, after keeping total of 24 days, first at -20°C (-4 °F) for 12 days then at 65°C (149 °F) for 12 days.	No Peeling and No Discoloration Observed
Low Temperature Impact Resistance	Cracking Observation on Altyno Sample on Aluminum Board, by Ball Drop Impact Test (40mm(1.57in) dia. 325g(0.72Lb) Steel ball, 100cm(39.4in) drop) after keeping at 0°C (32 °F) for 24 hours.	No Cracking Observed

Adhesion Strength Measured on Various Sample Substrates

Measured Peeling Force at 300mm(11.8in)/min Peeling Speed in 80 Degree Direction on 25mm(0.98in) Wide Altyno Sample Installed on each Substrate Test Specimen without Primer.

Substrate Sample Tested	Peeling Force Measured	Note and Caution
Plywood	5 (N/25mm), 1.1 (Lb.f/0.98in)	Not Recommended
Plaster Board	N/A (Substrate Broke)	Not Recommended
Calcium Silicate Board	5 (N/25mm), 1.1 (Lb.f/0.98in)	Not Recommended
Stainless Steel	36 (N/25mm), 8.1 (Lb.f/0.98in)	Good
Aluminum	26 (N/25mm), 5.9 (Lb.f/0.98in)	Good
Zinc Plated Steel	28 (N/25mm), 6.3 (Lb.f/0.98in)	Conduct Test for Reaction Degassing
PVC Coated Steel	41 (N/25mm), 9.2 (Lb.f/0.98in)	Good
Acrylic Board	33 (N/25mm), 7.4 (Lb.f/0.98in)	Good

Chemical Resistant and Solvent Resistance Tests

Observed Altyno sample surface after keeping for 24 hours upon water rinsing after 6 hours of contact with one drop of test chemical (or solvent) under a watch glass cover.

Chemical (or Solvent) Tested	Surface Observation Results
Ethanol	No Change Observed
n-Hexane	No Change Observed
Toluene	Gloss Change Observed
Ethyl Acetate	Substantial Surface Change Observed
MEK (Methyl Ethyl Ketone)	Substantial Surface Change Observed
Ammonia Water	No Change Observed
10% Hydrochloric Acid	No Change Observed
10% Sodium Hydroxide	No Change Observed
Acetone	Gloss Change Observed
Benzene	No Change Observed

Contamination Resistance (Cleaning) Test

Check Altyno test sample if test contaminants kept on Altyno test sample surface for 24 hours can be cleaned/removed by wiping with neutral detergent or Ethanol.

Contaminant Tested	Wiped with Neutral Detergent	Wiped with Ethanol
Black Tea	Cleaned	Cleaned
Coffee	Cleaned	Cleaned
Iodine Alcohol Solution	Stain Remained	Stain Remained
Vinegar	Cleaned	Cleaned
Citric Acid	Cleaned	Cleaned
Wax Crayon	Stain Remained	Cleaned
Black Shoe Polish	Stain Remained	Stain Remained
Fountain Pen Ink	Cleaned	Cleaned
Soy Sauce	Cleaned	Cleaned
Black Permanent Marker	Stain Remained	Stain Remained
Hair Dye	Cleaned	Cleaned