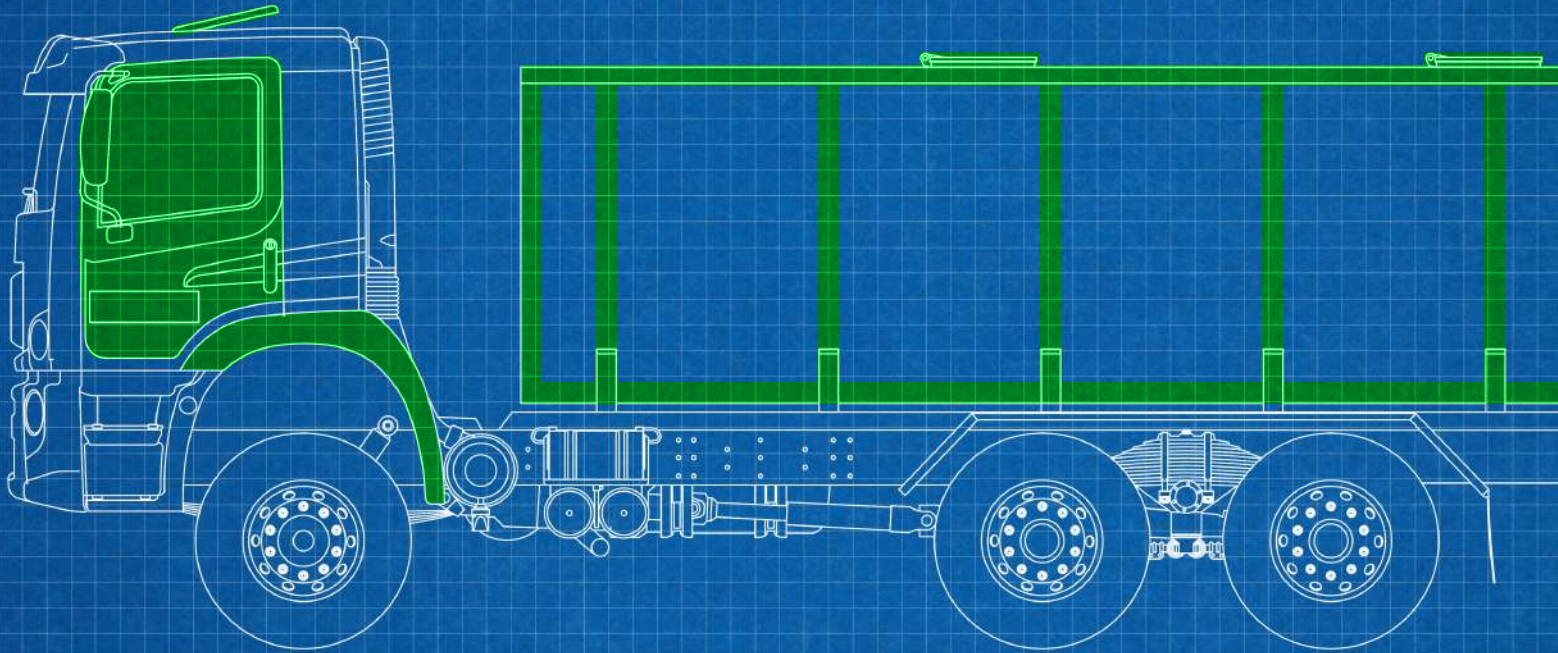


ADHESIVE TAPE SYSTEMS

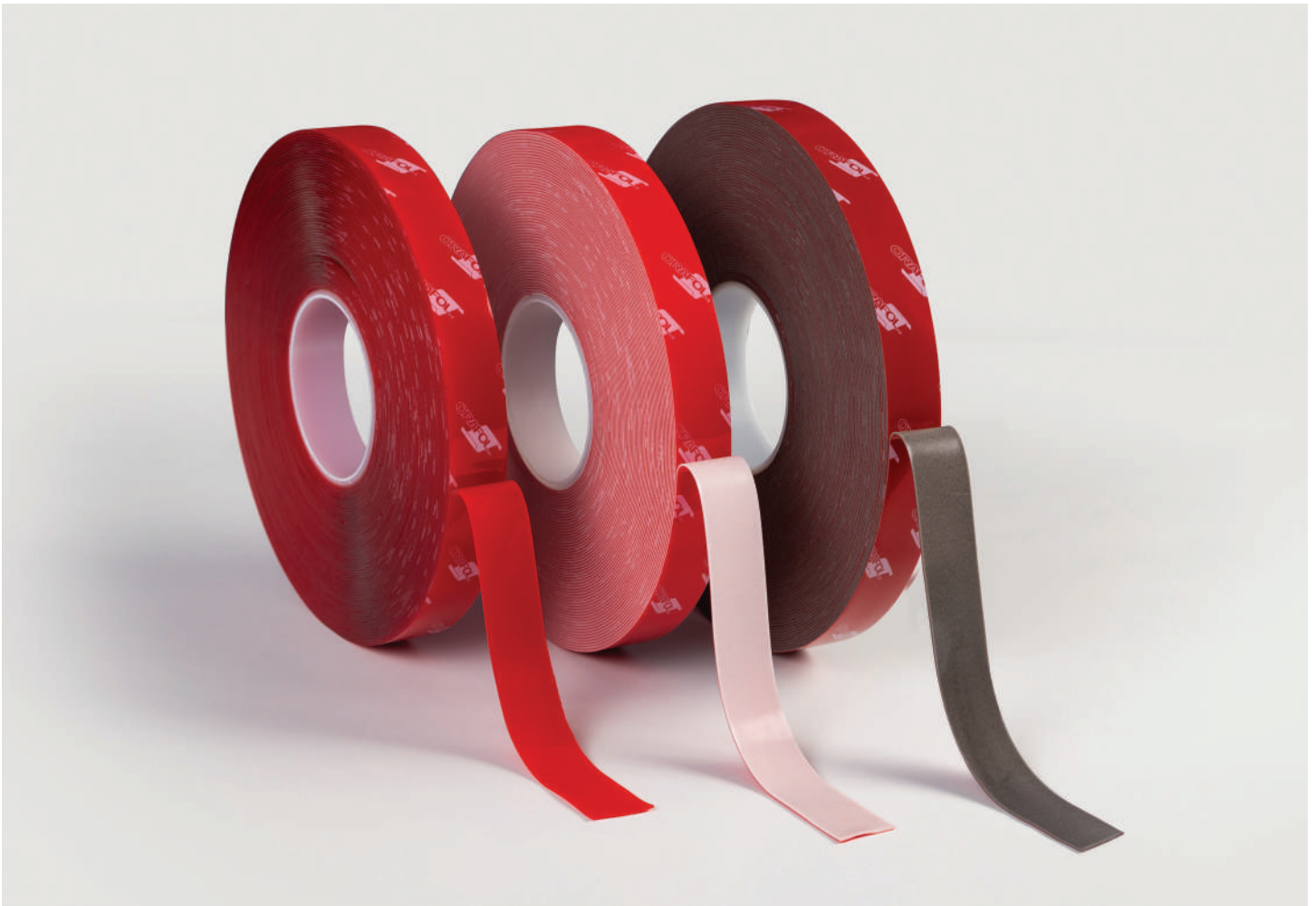


ORABOND[®] UHB Tapes

Ultra High-Bond

ENGINEERED FOR EXCELLENCE





UHB Tapes with an Ultra High-Bond

Strong bonding solutions that result in high-performance every time!

ORAFOL UHB Tapes are great for automotive, construction, engineering, sign & display, electrical, general and solar panel applications. Available in white, clear, and grey with thickness ranging from 10-80 mil.

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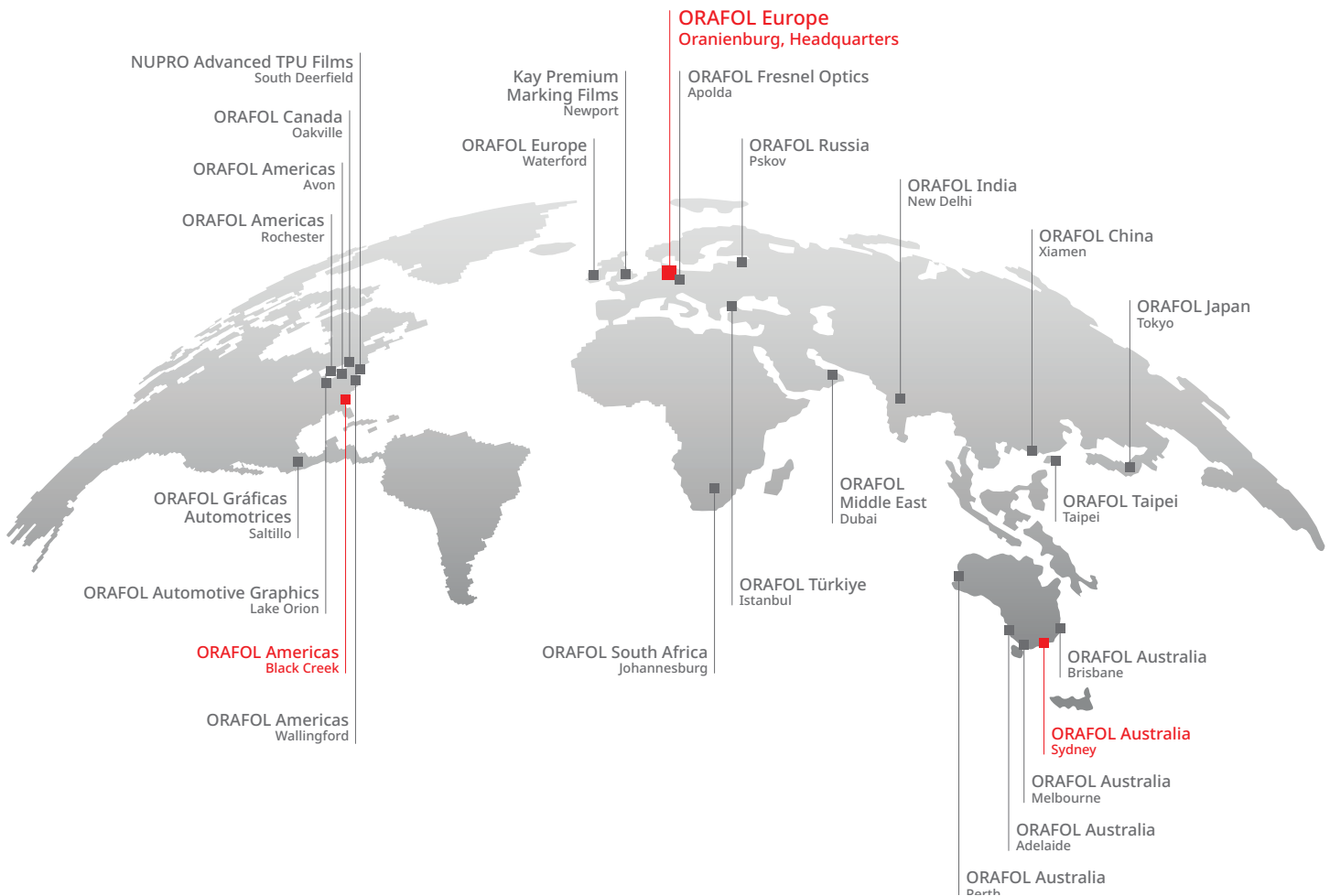


ORAFOL Europe GmbH

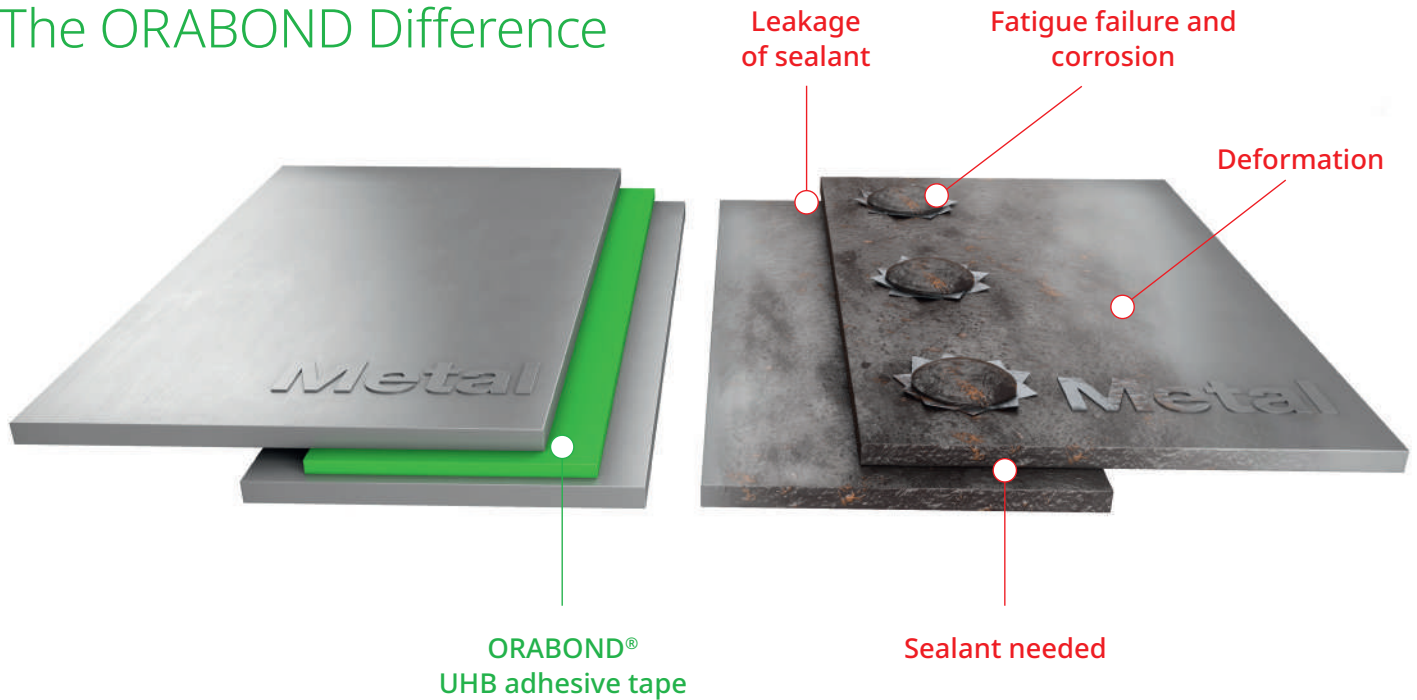
ORAFOL is one of the world's leading manufacturers of adhesive tape systems, innovative self-adhesive graphic films and reflective materials.

The international ORAFOL GROUP is headquartered just outside the city gates of Berlin, in Oranienburg.

ORAFOL's Worldwide Locations



The ORABOND Difference



ORABOND™ UHB tapes adhere to a wide variety of surfaces. The viscoelastic properties (flow characteristics) of the UHB tapes allow the adhesive to flow into the microscopic surface of materials. The adhesive bond is very strong when there is good 'wet out', maximum adhesive contact under pressure with the substrates to be bonded. Abrading the surface to be bonded further improves the strength of the bond. This creates a rough surface for a greater adhesive bonding area. The elastic characteristics of the foam give it very good internal cohesive strength to support loads in both static and dynamic shear. It also gives the foam very good peel adhesion strength. The tape is soft and very flexible which means it has great conformability. The foam also has very good elasticity due to the high internal cohesive strength of the foam. The tape is highly conformable.

ORABOND® UHB Tapes

Product	Thickness	Color	Adhesive	Carrier	Liner	Certifications	Temperature Resistance
UHB03025T	249 microns (10 mil)	transparent	foamed acrylic, clear	acrylic foamed adhesive	red PE film with white ORAFOL logo imprint	ASTM D1002 stainless steel ASTM D3330 stainless steel ASTM D897 aluminium	-40°F to +302°F
UHB03050T	500 microns (20 mil)	transparent	foamed acrylic, clear	acrylic foamed adhesive	red PE film with white ORAFOL logo imprint	ASTM D1002 stainless steel ASTM D3330 stainless steel ASTM D897 aluminum	-40°F to +194°F
UHB03064W	640 microns (25 mil)	white	foamed acrylic, white	acrylic foamed adhesive	red PE film with white ORAFOL logo imprint	ASTM D 1002 ASTM D3330 stainless steel ASTM D897 aluminium	-40°F to +212°F
UHB03080G	800 microns (31 mil)	grey	foamed acrylic, grey	acrylic foamed adhesive	red PE film with white ORAFOL logo imprint	ASTM D1002 stainless steel ASTM D3330 stainless steel ASTM D897 aluminium	-40°F to +212°F
UHB03100T	1,000 microns (40 mil)	transparent	foamed acrylic, clear	acrylic foamed adhesive	red PE film with white ORAFOL logo imprint	ASTM D1002 stainless steel ASTM D3330 stainless steel ASTM D897 aluminum	-40°F to +194°F
UHB03110G	1,100 microns (44 mil)	grey	foamed acrylic, grey	acrylic foamed adhesive	red PE film with white ORAFOL logo imprint	ASTM D1002 stainless steel ASTM D3330 stainless steel ASTM D897 aluminum	-40°F to +212°F
UHB03110W	1,100 microns (44 mil)	white	foamed acrylic, white	acrylic foamed adhesive	red PE film with white ORAFOL logo imprint	ASTM D1002 stainless steel ASTM D3330 stainless steel	-40°F to +212°F

Peel Strength	Key Properties	Application Areas	Alternative To
9.4 lb/in (24 hr dwell)	<p>High performance bonding and mounting.</p> <p>High shear holding power and temperature resistance.</p> <p>Clear adhesive improves bondline aesthetics when joining transparent materials.</p>	<p>Ideally suited for structural and general bonding including body panels, emblems, illuminated displays, and signage.</p>	3M 9473
10.8 lb/in (24 hr dwell)	<p>High performance bonding and mounting.</p> <p>High shear holding power and temperature resistance.</p> <p>Clear adhesive improves bondline aesthetics when joining transparent materials.</p>	<p>Ideally suited for structural and general bonding including body panels, emblems, illuminated displays, and signage.</p>	3M 4905
11.7 lb/in (24 hr dwell)	<p>High performance bonding and mounting.</p> <p>High shear holding power and temperature resistance.</p>	<p>Ideally suited for structural and general bonding including body panels, emblems, illuminated displays, and signage.</p>	3M 4930
13 lb/in (24 hr dwell)	<p>High performance bonding and mounting.</p> <p>High shear holding power and temperature resistance.</p> <p>Elastomeric nature of the foamed adhesive makes it ideal for applications requiring conformability.</p>	<p>Ideally suited for structural and general bonding including body panels, emblems, illuminated displays, and signage.</p>	3M 5314
10.8 lb/in (24 hr dwell)	<p>High performance bonding and mounting.</p> <p>Ideal for applications where thermal expansion differences are a concern.</p> <p>Clear adhesive improves bondline aesthetics when joining transparent materials.</p>	<p>For mounting, bonding and sealing of illuminated displays, signage, and safety glass shower screens.</p>	3M 4910
11.5 lb/in (24 hr dwell)	<p>High performance bonding and mounting.</p> <p>Ideal for applications where thermal expansion differences are a concern.</p>	<p>For structural and general bonding including body panels, emblems, illuminated displays, and signage.</p>	3M 4941/5952
11.2 lb/in (24 hr dwell)	<p>High performance bonding and mounting.</p> <p>Ideal for applications where thermal expansion differences are a concern.</p>	<p>For structural bonding applications in the transportation industry, plastics and wooden window glazing bars.</p>	3M 4950

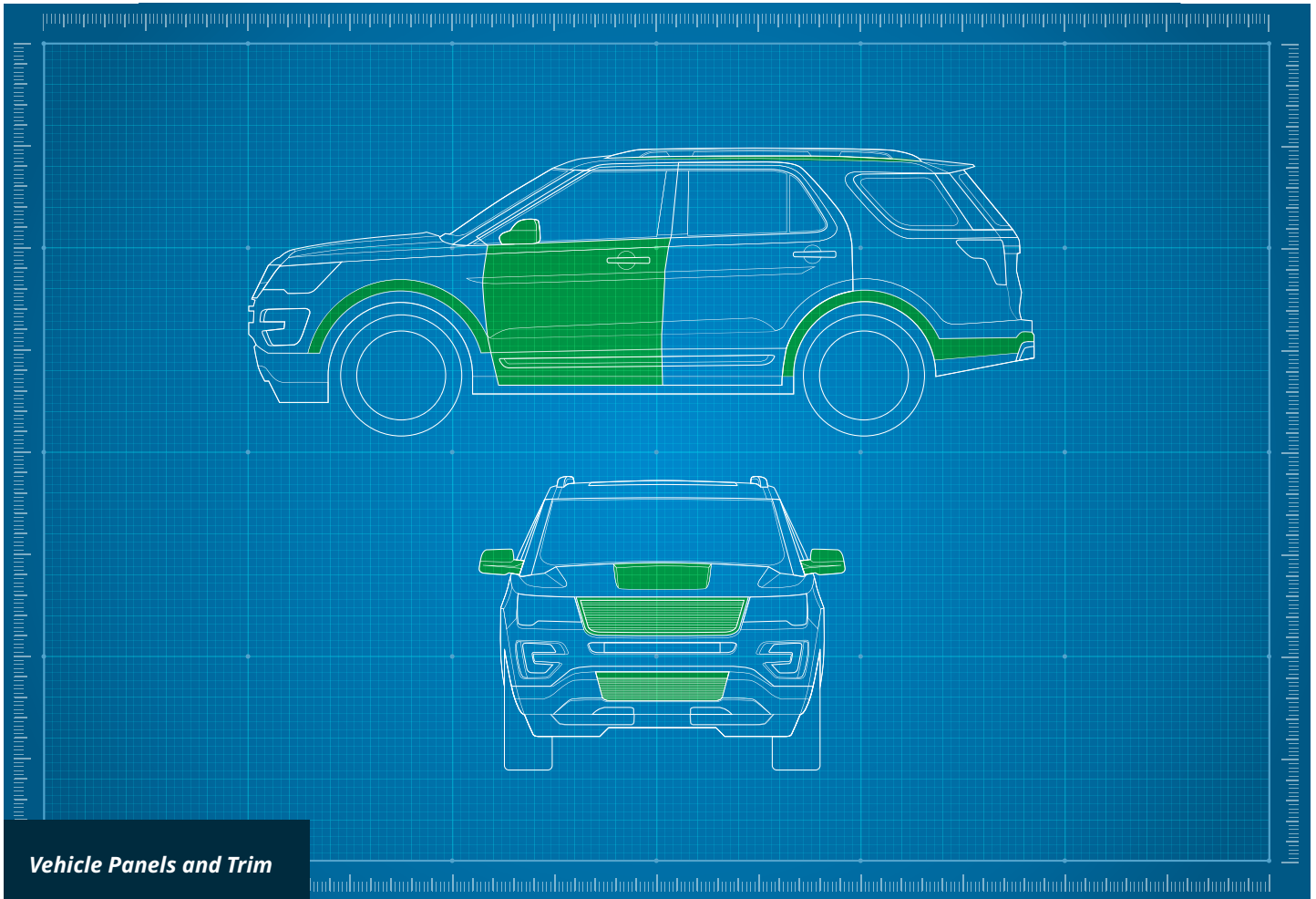
ORABOND® UHB Tapes

Product	Thickness	Color	Adhesive	Carrier	Liner	Certifications	Temperature Resistance
UHB04064G	640 microns (25 mil)	grey	foamed acrylic, grey	acrylic foamed adhesive	red PE film with white ORAFOL logo imprint	ASTM D1002 stainless steel ASTM D3330 stainless steel ASTM D897 aluminum	-40°F to +212°F
UHB04150G	1,500 microns (60 mil)	grey	foamed acrylic, grey	acrylic foamed adhesive	red PE film with white ORAFOL logo imprint	ASTM D 1002 ASTM D 3330 stainless steel ASTM D 897 aluminium	-40°F to +212°F
UHB04200G	2,000 microns (80 mil)	grey	foamed acrylic, grey	acrylic foamed adhesive	red PE film with white ORAFOL logo imprint	ASTM D 1002 ASTM D 3330 stainless steel ASTM D 897 aluminium	-40°F to +212°F

Peel Strength	Key Properties	Application Areas	Alternative To
11 lb/in (24 hr dwell)	<p>High performance bonding and mounting. Ideal for applications where thermal expansion differences are a concern.</p>	<p>Ideally suited for structural and general bonding including automotive, solar, electronic, and the sign and display industry.</p>	3M 4935F
11.2 lb/in (24 hr dwell)	<p>High performance bonding and mounting.</p> <p>High shear holding power and temperature resistance.</p> <p>Ideal for applications where thermal expansion differences are of concern.</p>	<p>Ideally suited for structural and general bonding including body panels, emblems, illuminated displays, and signage.</p>	3M 4956
(24 hr dwell)	<p>High performance bonding and mounting.</p> <p>High shear holding power and temperature resistance.</p> <p>Ideal for applications where thermal expansion differences are of concern.</p>	<p>Ideally suited for structural and general bonding including body panels, emblems, illuminated displays, and signage.</p>	3M 4991



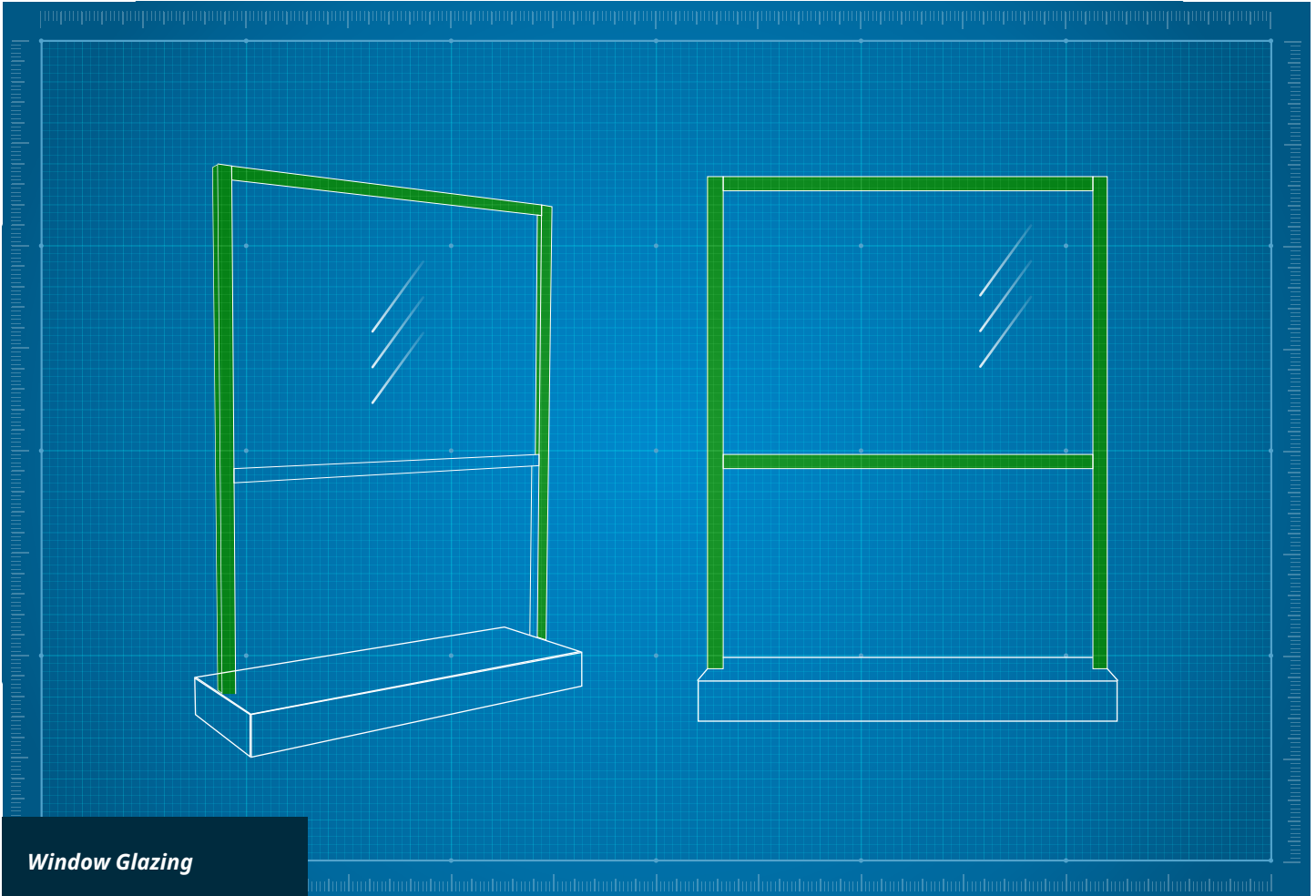
Applications By Industry



Automotive Solutions

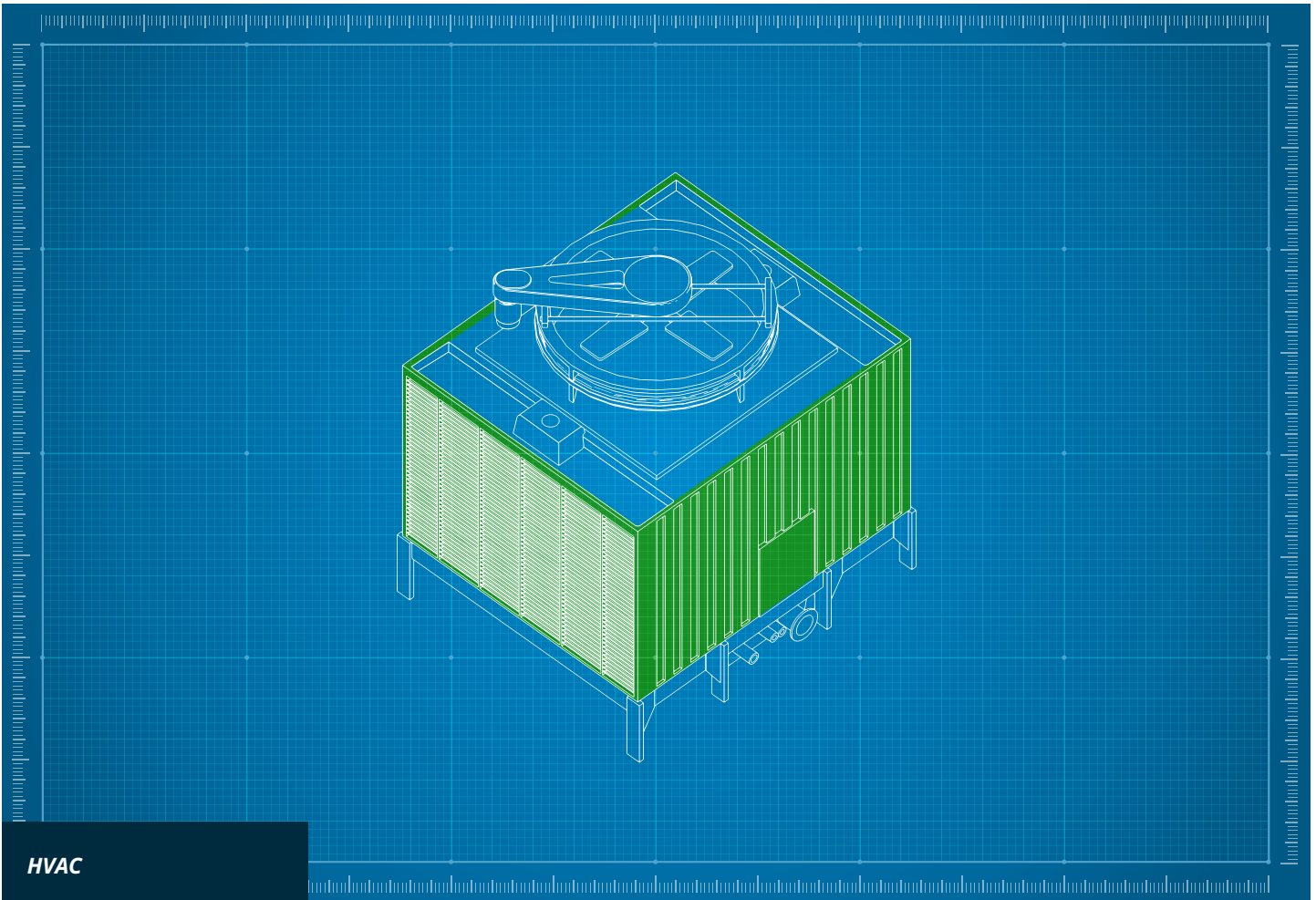
- Wind and water deflectors
- Door seals
- Nameplate – emblem mounting
- Fixing such as front and rear bumper, spoiler, rain sensor, antenna, etc.
- Wing mirror molded shells
- Rear light cover
- Air intake and grille
- Body side moldings
- Ground skirt, running board
- Roof rails
- Protective metal plates and trims

Applications By Industry



Construction Solutions

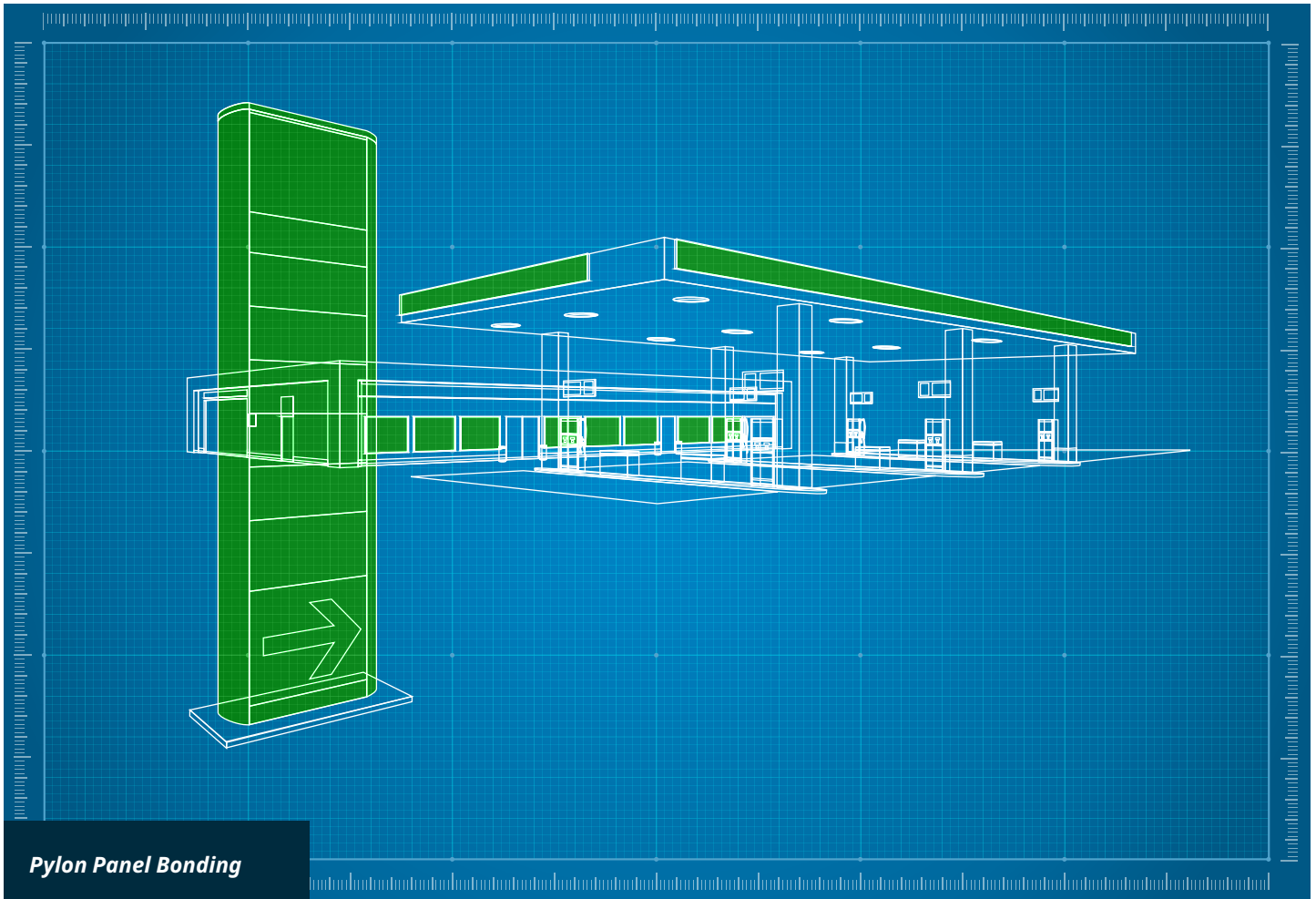
- BIPV built in photovoltaics
- Climate control ceilings
- Shop frontage/aluminum - glass
- Bonding composite architectural cladding panels
- Bomb proof windows
- Interior partition systems
- Structural glazing bonding
- Bonding large glass facades into aluminium frames
- Production of elevator interiors, doors and ceilings
- Window and door manufacturing
- Production of sky lights



General Industrial Solutions

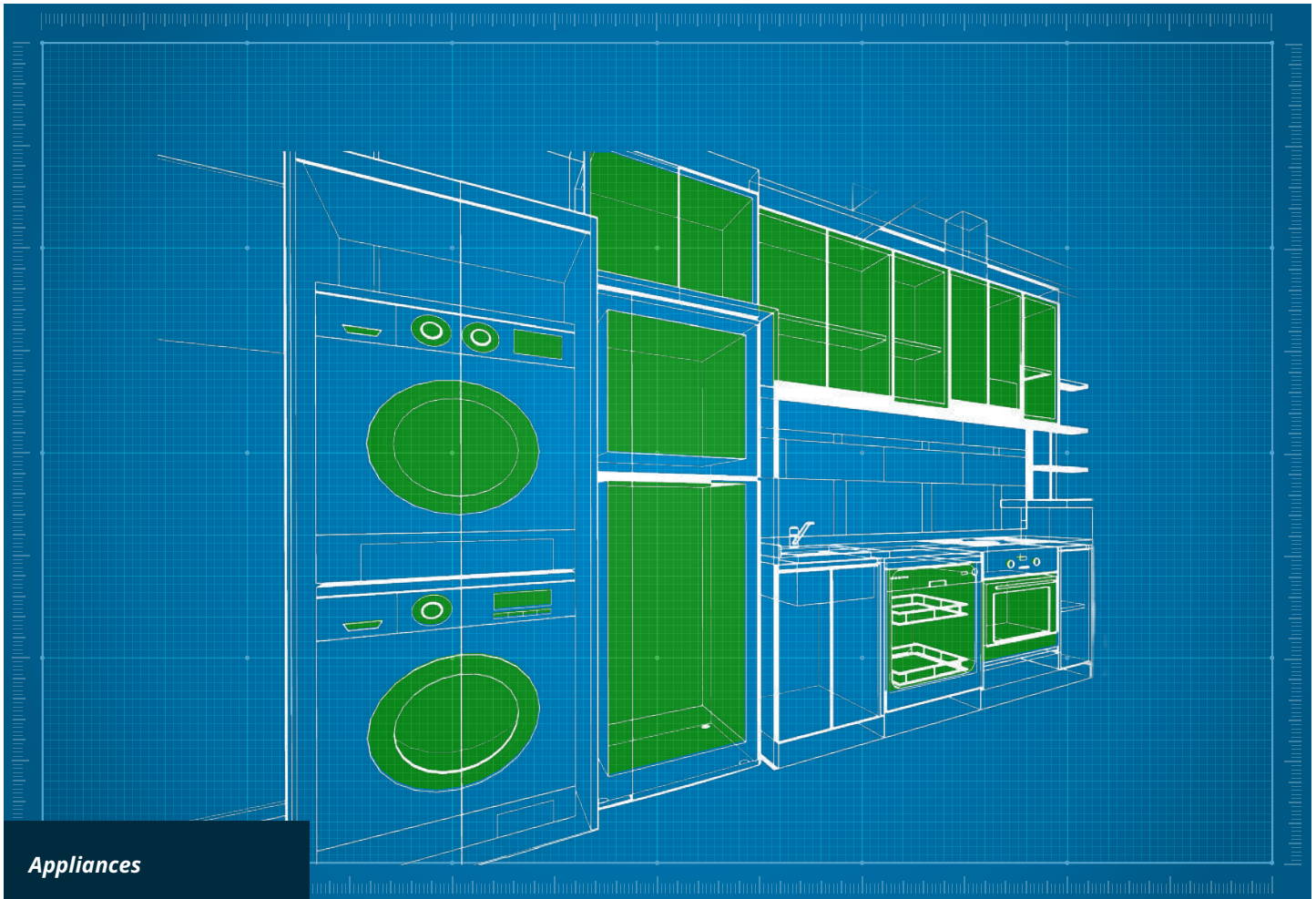
- Air Extraction units
- Control Panel fascias
- Electrical fuse boxes
- Escalators
- Machinery housing
- Patch panels
- Bonding all types of Metal
- Duct work
- Elevators
- Fans
- Moving walkways
- Solar panel-to-frame bonding
- Solar junction box mounting
- M.R.O., Maintenance Repairs Operations
- Glass Fabrication
- Point of Sale
- Furniture/Kitchens/Bathrooms
- Plastic mouldings and extrusions

Applications By Industry



Sign & Display Solutions

- Bonding A frame signs
- Fixing box signs - panels to frames
- Large panel signs
- Bonding clear polycarbonate for illuminated signs
- Fixing housings and light units in emergency signs
- Name plate bonding
- Bonding plate signs
- Fixing individual letter signs
- Point of sale bonding
- Construction of obelisk signs
- Fixing LED strip lights



Home Appliance Solutions

- Mounting of displays
- Glass trim fixing
- Glass door fixing
- Fixing of small parts
- Noise and vibration reduction
- Evaporator mounting
- Trim mounting
- Vacuum insulation panel mounting
- Control panel mounting
- Fixing of emblems

Preparation and Cleaning

To achieve optimum adhesion, all surfaces must be free of loose materials, e.g. dust or other particles. It is important to remove any oil, grease or aqueous films. For example, the "ORAFOL Cleaner" (a mixture of isopropanol and water) can be used, with the use of lint-free disposable towels if possible. After cleaning, the surface energy can be measured with Dyne Test Pens. More persistent contaminants may require the use of stronger / alternative cleaners such as heptane or other solvents.

Surface Pretreatment Adhesion Promoters

Some materials do not provide an adequate surface for adhesion even after proper cleaning and require surface pretreatment. This can be done via physical methods (roughening or flaming the surface) or by chemical methods (e.g. pickling).

Adhesion Promoters (primers)

By using the adhesion promoter ORABOND™ UHBPrimerA (or B with UV indicator), better adhesion, stronger initial bond strength and better adhesion below 15 °C can be achieved, especially for high-shear ORABOND™ acrylic adhesives.

IMPORTANT: Only use adhesion promoter on the adhesive areas! For this purpose, the corresponding area can be demarcated with masking tape (for example ORATAPE® MT95). For glass bonding in outdoor applications, we recommend using the silane-based UHBPrimerG.

Temperature

An average room temperature of approx. 21 °C / 70 °F is recommended for bonding. Special low-temperature UHB™ grades and the use of the ORABOND™ UHBPrimerA / B can be helpful for colder conditions and substrates. Condensation on the surface should be avoided at all costs.

Time

Depending on the design and temperature, ORABOND™ UHB™ pressure sensitive adhesives require some time to achieve full adhesion, ranging from 24-72 hours at 21 °C / 70 °F. Preheating surfaces and using the UHBPrimerA / B reduce the time to full adhesion.

Tape Loading and Design Parameters

Depending on the design and temperature, ORABOND™ UHB™ pressure sensitive adhesives require some time to achieve full adhesion, ranging from 24-72 hours at 21 °C / 70 °F. Preheating surfaces and using the UHBPrimerA / B reduce the time to full adhesion.

UHB Primer

This versatile adhesion promoters improve the adhesion to difficult-to-bond elastomers such as thermoplastic (TPE), polyolefins (TPO) and EPDM. The low viscosity makes this easy to apply and no dilution is necessary.



UHB Primer A
Product Number 351009018



ORABOND® UHB TAPES

Ultra High-Bond

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