ORAFOL®

Adhesive Tape Systems

Ultra High Bond (UHB) Tapes

ORAMOUNT®

Engineered to Perform Better™

Located just outside of Berlin in the heart of Europe, the ORAFOL Europe GmbH headquarters is the hub of the organization's culture of leadership and excellence.

What makes UHB tapes bond so well?

ORAMOUNT® UHB (Ultra High Bond) tapes bond 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 actually improves the strength of the bond.
This creates a rough surface for a greater adhesive bonding area.

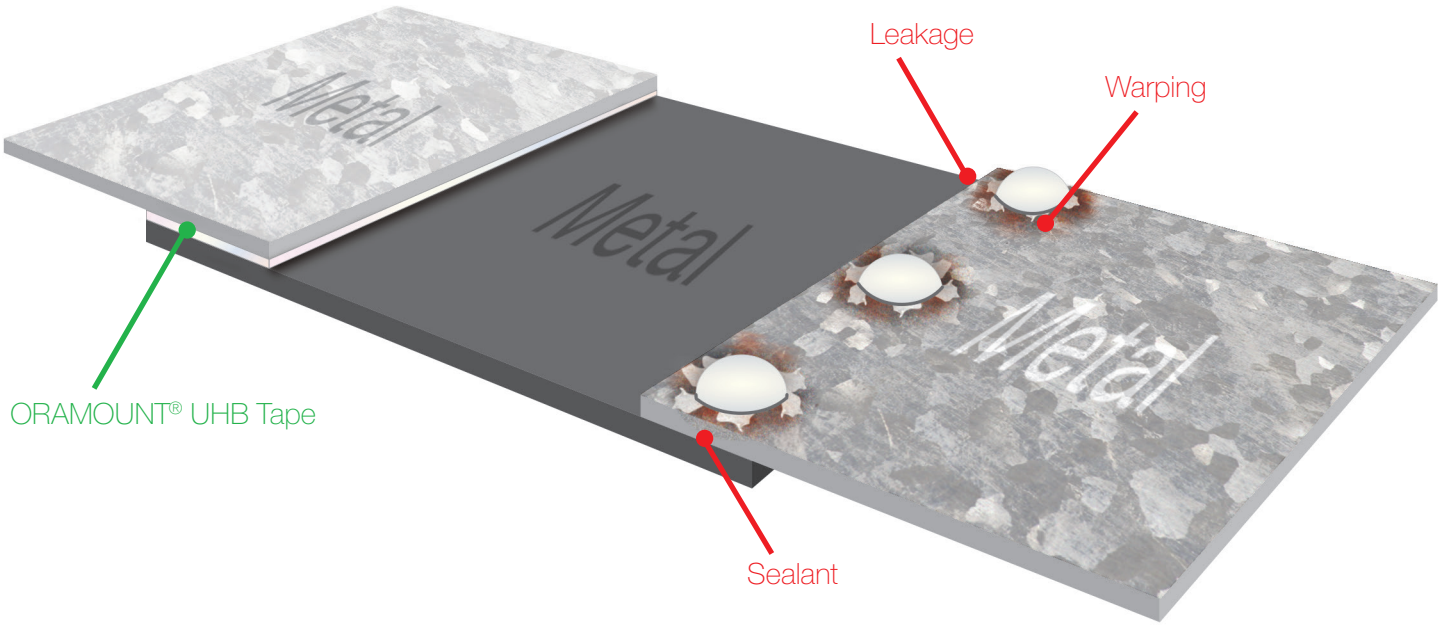
The ***elastic characteristics*** of the foam give it very good internal cohesive strength to support loads in both static and dynamic shear. It also gives the foam very good peel adhesion strength.

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 will ***radius well*** (go around curves).

Avoid these *Common* Mechanical Fixing



Aesthetics

"Cheap" sounding/Noisy

Clean bond specified *(designer/architect)*

Unsightly fasteners *(rivets)*

High Assembly/Design Cost

Finishing after assembly

Fixturing/cure time required

High Labour skill level

Many holes to drill

Two components required *(gasket/fastener)*

Durability

Environmental/solvent exposure

Fatigue failure

Holes place for corrosion

Material Limitations

Differential thermal expansion

Galvanic corrosion *(metals)*

Thicker than required

Issues by using ORAMOUNT® UHB Tapes.

FEATURES & BENEFITS OF UHB TAPES

Spreads load and stress across the plane of the bond	=	No stress points (compared to mechanical fixings) and excellent load-bearing capabilities
Stops metal fatigue and mechanical degradation	=	Better performance than fixings such as screws, nuts and bolts
Provides invisible fixing and bonding	=	Aesthetic enhancement, no visible screw heads
Replaces spot welding	=	No distortion of sheet metal and no welding bead needs to be ground down.
Highly durable	=	Resilient performance in all weather conditions
Visoelastic foam properties allow stress relaxation	=	Withstand thermal expansion and contraction movements in the joint
Conformable 2	=	Absorbs properties such as vibration, dampening, shock, absorption and sealing
Versatile fixing solution	=	Bonds to a wide variety of surfaces
Better choice of bond/fixing (better application process???)	=	Reduces re-finishing work, touch-ups and clean-up time
Improves productivity	=	Quick to use, clean, safe and economic
Complete seal can be achieved	=	Non mechanical fixing means no punctures, holes or damage to bonded substrates and eliminates opportunity for rusting

UHB Adhesion Guidelines for Substrates

Substrate Material		Adhesion	Primer Usage
Aluminum Anodized Aluminum Copper Lead	Painted Metal Stainless Steel Tin Zinc	Excellent	Not Necessary
Alkyd Enamel Epoxy Paint Kapton Nylon	Polychloroprene Polyester Polyurethane	Very Good	May Need Primer
ABS (Acrylonitrile-Butadiene-Styrene) Acrylic Polycarbonate	Polystyrene PVA (Polyvinyl Acetate) PVC (Polyvinyl Chloride)	Good	Recommended
EPDM (Ethylene Proplene Diene Monomer-Rubber) EVA (Ethylene Vinyl Acetate)	Polyethylene Polypropylene Tedlar	Good	Required
Silicone	Teflon	Poor	

Attention	Surfaces to which the material will be applied must be cleaned thoroughly of dust, grease or any contaminants. It is the end users responsibility to verify painted surfaces are completely cured prior to adhesive tape application.
Preparation	Cleaned with an appropriate solvent; preferably IPA no more than 15 minutes prior to bonding.

Typically full bond is reached after 72 hours.
(50% at 20 minutes, 90% at 24 hours.)

ORAMOUNT® UHB

The Tape

that replaces the need for

Mechanical Fasteners & Liquid Adhesives.

Applications by Industry

D/C about using this; associated with non UHB tape product in sign & display brochure

Automotive

Air intake and grille	Body side moldings	Ground skirt, running board	Rain sensor fixing	Roof rails	Wind and water deflectors
Antenna fixing	Door seals	Nameplate – emblem mounting	Rear light cover	Spoiler fixing	Windscreen wiper spoiler
B-pillar covers	Front and rear bumper fixing	Protective metal plates and trims	Rear mirror attachment	Wheel arch trim	Wing mirror molded shells

Construction

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

Engineering

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	Touch screens
Bonding Engineering Plastics & composites	Electrical control boxes				

Sign & Display

Bonding A frame signs

Bonding clear polycarbonate for illuminated signs

Bonding plate signs

Construction of obelisk signs

Dot matrix signs

Fixing box signs - panels to frames

Fixing housings and light units in emergency signs

Fixing individual letter signs

Fixing LED strip lights

Frame bonding for digital signs

Large panel signs

Name plate bonding

Point of sale bonding

Road Traffic Signs

Electrical

Lighting

White Goods– dishwashers, refrigerators, washing machines, etc.

General

D.I.Y.

Furniture / Kitchens / Bathrooms

Glass Fabrication

Plastic mouldings and extrusions

Point of Sale

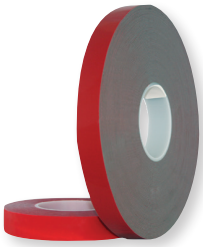
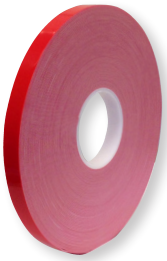
Solar

Frame bonding

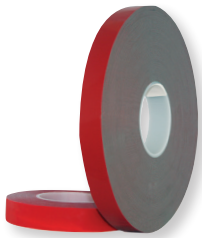
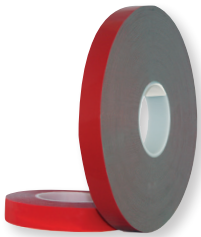
Junction Box mounting

Thin film back rail mounting

ORAMOUNT® Ultra

	3594	3595	3596	3597	3598
					
Alternative to	3M RP25	3M 4930	3M 9473	3M 4905	3M 5314
Key Property	High Performance Bonding & Mounting High shear holding power and temperature resistance		High Performance Bonding & Mounting High shear holding power and temperature resistance Clear adhesive improves bondline aesthetics when joining transparent materials		High Performance Bonding & Mounting High shear holding power and temperature resistance Elastomeric nature of the foamed adhesive makes it ideal for applications requiring conformability
Adhesive	Foamed Acrylic, Gray	Foamed Acrylic, White	Foamed Acrylic, Clear		Foamed Acrylic, Gray
Carrier	Gray	White	Clear		Gray
Liner	5-mil release coated polyethylene, Red				
Thickness	640 microns 25-mil		249 microns 10-mil	500 microns 20-mil	800 microns 31-mil
Roll Size & Rolls/Case			12 mm x 33 m (½" x 36 yd) 19 mm x 33 m (¾" x 36 yd) 25 mm x 33 m (1" x 36 yd)	24 16 12	

High-Bond (UHB) Tapes

3599	3600	3601	3602	3603
				
3M 4910	3M 4941/5952	3M 4950	3M 4991	3M 4956
High Performance Bonding & Mounting Ideal for applications where thermal expansion differences are a concern Clear adhesive improves bondline aesthetics when joining transparent materials	High Performance Bonding & Mounting Ideal for applications where thermal expansion differences are a concern		High Performance Bonding & Mounting High shear holding power and temperature resistance Ideal for applications where thermal expansion differences are of concern	
Foamed Acrylic, Clear	Foamed Acrylic, Gray	Foamed Acrylic, White	Foamed Acrylic, Gray	
Clear	Gray	White	Gray	
5-mil release coated polyethylene, Red				
1,000 microns 40-mil	1,100 microns 44-mil		2,000 microns 78-mil	1,500 microns 59-mil
	12 mm x 33 m (½" x 36 yd)	24	13 mm x 16.5 m (½" x 18 yd)	23	13 mm x 25 m (½" x 27 yd)	23
	19 mm x 33 m (¾" x 36 yd)	16	15 mm x 16.5 m (¾" x 18 yd)	20	15 mm x 25 m (¾" x 27 yd)	20
	25 mm x 33 m (1" x 36 yd)	12	25 mm x 16.5 m (1" x 18 yd)	12	25 mm x 25 m (1" x 27 yd)	12

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