

ORABOND™ UHB03110G

With an Ultra High Bond

Technical Datasheet
02/20
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Description

ORABOND™ UHB03110G Series tape consists of a gray foamed acrylic pressure sensitive adhesive designed for high performance bonding and mounting applications. The elastomeric nature of the foamed adhesive makes it ideal for applications requiring conformability and where thermal expansion differences are of concern.

Liner

5-mil release coated polyethylene, red

Adhesive

Foamed acrylic, gray

Area of use

Structural and general bonding including body panels, emblems, illuminated displays and signage.

Technical Data

Thickness (without liner)	44-mil
Temperature resistance	-40°F to +212°F
Sheer strength (ASTM D1002, stainless steel)	90 lb/in ² [24 hr dwell]
180° peel strength (ASTM D3330, stainless steel)	11.5 lb/in [24 hr dwell]
Tensile adhesion (ASTM D897, aluminum)	112 lb/in ² [24 hr dwell]
Shelf life	2 years
Application temperature	+50°F

*average ** original packaging, at 72°F / 50% relative humidity

Packaging Information

Core size	3 inch
Slit widths	1/2 inch, 3/4 inch, 1 inch

Application Instructions

At ORAFOL we are interested in the successful application of our pressure-sensitive adhesives by our customers. The following notes are intended to provide suitable support for customer-specific application tests. In all cases, in case of uncertainties, please contact your ORAFOL representative. (www.ORAFOL.com)

Preparation/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.



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Surface Pretreatment	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.
Contact Pressure	Pressure-sensitive adhesives develop their specified adhesive forces from a defined contact pressure. The amount of pressure depends on the desired initial tack, the adhesive used, and its width and thickness. For a 10 mm wide ORABOND™ tape, roll weights between 2 and 7 kg at 10 mm/s are used. The pressure can be checked with chalk pencils or a transparent mating part.
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	The following design parameters apply to our ORABOND™ UHB™ Acrylic Foam Adhesive Tapes: For static loadings, peel and splitting forces must be avoided. For tensile or tensile shear loadings: 60 cm ² adhesive tape per 1 kg static load. UHB™ systems can compensate for 300% of their thickness with thermal expansion. For joint gap tolerances, these systems can compensate for 50% of the tape thickness per metre, provided these tolerances are not in the form of steps or edges.

IMPORTANT NOTICE

All ORABOND™ products are subject to careful quality control throughout the manufacturing process and are warranted to be of merchantable quality and free from manufacturing defects. Published information concerning ORABOND™ products is based upon research which the Company believes to be reliable although such information does not constitute a warranty. Because of the variety of uses of ORABOND™ products and the continuing development of new applications, the purchaser should carefully consider the suitability and performance of the product for each intended use, and the purchaser shall assume all risks regarding such use.

All specifications are subject to change without prior notice.

WARNING: This product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

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