

Core-Bond B600R Core-Bond B650R Core-Bond B750R

Core Bedding Adhesive

Product Overview

Core-Bond B600R, Core-Bond B650R and Core-Bond B750R are high quality isophthalic polyester resin based core bonding adhesives specifically formulated for use with structural foam and balsa cores. They are catalysed with standard MEKP catalyst. It is important to fill all the kerfs and cuts in contoured foam or balsa and have no air entrapment between the core and the laminate. Priming the core with catalysed resin is recommended practice particularly for higher density cores. These materials can be applied with a spray applicator or hand trowel.

Features and Benefits

Light weight
Smooth consistency
Non sagging
Very low shrink

Half the weight of glass and resin laminate
Reduced emissions compared to glass and resin
Long shelf life
Proven chemistry, long track record

Characteristics Using 1.25% by weight with MEKP Catalyst

A standard 9% active oxygen MEKP catalyst is recommended such as DDM-9, MEKP-9, etc.

Characteristics	Typical Value
Working Time/Geltime ¹	30– 45 Minutes
Fixture Time ²	3-4 Hours
Gap Filling	0.030 inch minimum

1. Geltime measured with 100g mass of adhesive at 75° F
2. Time taken at 75°F (ambient temperature) to achieve 80% strength in lap-shear tests

Liquid Properties

Property	B600R	B650R	B750R
Viscosity ³	52,000– 64,000 cP	100,000-140,000 cP	116,000-130,000 cP
Specific Gravity	0.57-0.63	0.62-0.68	0.72-0.78
Shelf Life ⁵	12 Months	12 Months	12 Months

3. Measured using Brookfield HAF with T-C spindle at 5 rpm at 75°F,
4. Mix ratio based on volume and weight for both machine dispensing and hand mixing.
5. Shelf life is defined from date of manufacture when stored under recommended conditions.

Typical Material Properties

Property	B600R	B650R	B750R
Hardness Shore D	60 minimum	60 minimum	60 minimum
Tensile Strength	1450 psi	1450 psi	2000 psi
Tensile Modulus	145 ksi	145 ksi	200 ksi
Tensile Strain	2%	2%	1%
Water Absorption ISO 62	0.0028 oz	0.0028 oz	0.0028 oz
Linear Shrinkage	< 1.0%	< 1.0%	< 1.0%

Coverage

Following estimates are based on tests on typical flat laminate roughness. Add material for curvature (opening kerfs and cuts) to ensure full filling of all the voids within the sandwich laminate.

Saw cut foam

Core-Bond Yield for Saw Cut Structural Foams (estimate)				
Core Thickness	1/4"	1/2"	3/4"	1"
Adhesive Thickness	1.5 mm	2.0 mm	3.0 mm	3.5 mm
Yield (rounded)	27 ft ² /gallon	20 ft ² /gallon	14 ft ² /gallon	12 ft ² /gallon

Balsa or knife-cut foams

Core-Bond Yield for Knife Cut Structural Foams or Balsa (estimate)				
Core Thickness	1/4"	1/2"	3/4"	1"
Adhesive Thickness	1.0 mm	1.5 mm	2.0 mm	2.0 mm
Yield (rounded)	41 ft ² /gallon	27 ft ² /gallon	20 ft ² /gallon	20 ft ² /gallon

Surface Preparation

As with all adhesives, maximum performance is only achieved with adequate surface preparation. When bonding the back surface of (polyester) GRP, a simple solvent wipe with acetone is satisfactory pre-treatment to clean and degrease the surface. However, for gelcoated GRP surfaces and for other substrates, degrease using acetone or similar followed by abrasion and a final degrease is recommended.

For chemical adhesion to the laminate it is important to bond within the secondary bonding window specified by the resin manufacturer. This is usually between 24 and 72 hours.

Applications

The triple digit series of Core-Bond are promoted to gel in 45 minutes at 75° F with a standard MEKP catalyst. Never catalyse below 0.75% or above 2.25% by weight. Contents may settle in during storage and shipment therefore it is recommended to mix the material prior to catalyzation to ensure homogeneity. Using a notched trowel apply the correct thickness of material for your core choice and surface curvature. The higher density and viscosity Core-Bond B750R is better suited for vertical surfaces to eliminate any sagging.

Core material should be primed with a catalysed resin to improve the bond. An orthophthalic based resin with low styrene is recommended such as the Priming Resin R101 from Scott Bader. Some isophthalic or vinyl ester resins are not suitable for priming PVC or SAN foams. If in doubt: test! Apply the right amount of priming resin to the core material avoiding excess. The texture of the core should remain visible.

After bonding tap the surface of the core to test for any voids using a coin. A dull or hollow sound will indicate voids. Repair areas with voids before final lamination.

Refer to the Core-Bond Manual for more detailed information on core bedding methods.

Contact your local Scott Bader representative for questions or assistance with the selection of adhesives for your use. This product is intended for use by skilled individuals at their own risk. Recommendations contained herein are based on information we believe to be reliable. The properties and strength values obtained under controlled conditions at the Scott Bader laboratory.

Storage

Store between 60° and 80° F in the original, unopened container in a dry, well ventilated place. Protect from direct sunlight. Exposure to temperatures outside of these conditions will reduce shelf life. Ideally containers should be opened only immediately prior to use.

Packaging

Available in 5 gallon (19 litre) plastic or metal pails and 50 gallons (189 litre) drums.

Health and Safety

See separate Safety Data Sheet.

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All information on this data sheet is based on laboratory testing and is not intended for design purposes. Scott Bader makes no representations or warranties of any kind concerning this data. Due to variance of storage, handling and application of these materials, Scott Bader cannot accept liability for results obtained. The manufacture of materials is the subject of granted patents and patent applications; freedom to operate patented processes is not implied by this publication.

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