

# CORE-BOND® B70

## Polyester-based Core Adhesive for Foams and Balsa

### Introduction

Core-Bond B70 is a polyester-based core bedding compound, developed for both hand-layup and vacuum-bag core installation, and is used as a 2-part system in conjunction with a priming resin applied to the core surface. Lightweight and non-sagging, Core-Bond is formulated to the degree of elasticity required for the core to skin interface. With a shrinkage of less than 1%, Core Bond significantly reduces the possibility of print-through. Core-Bond is easily applied with a ¼" (6mm) V-notch trowel, and achieves a thin bond line of approx. 1/32"-3/64" (approx 1mm). One gallon (3.78l) covers approx. 30 square feet (3m2). Always prime core surface with a catalyzed resin. The Core-Bond combines with the priming resin for a thorough cure and good cohesion. The priming resin should appear between the blocks of contoured foam, or in the bleeder holes of plain foam, for a visual inspection of a good bond. Core-Bond is catalyzed with a green BPO paste catalyst supplied by SB-ATC. Other Core-Bond types: Core-Bond B73 used with BPO for gun application, B71/75 are sprayable versions using MEKP, (page 2). Core-Bond meets cleavage strength requirements for balsa and foam cores.

### General Properties

Colour	White
Density	0.68 -0.72 g/cc (5.75-6 lbs./gallon)
Compression strength	1800 psi
Deformation before rupture	9.8%
Shrinkage	Less than 1%
Viscosity, HAF Spindle T-A 5RPM, Cps.	4,000 - 5,600
Thixotropy	Non - Sagging
Capillary absorption	None, non-porous surface
Water absorption	Less than 1%
Viscosity	108,000 - 124,000 cps

Installing a core material with Core-Bond is a 2-part system consisting of Core-Bond, which is catalyzed with a BPO/5 (50% benzoyl peroxide) green paste catalyst, and a GP or ortho/DCPD laminating resin for priming the foam or balsa core, which is catalyzed with an MEKP catalyst. The catalyzation instructions below, for a 50-55 minute gel time, are based on a 100 gram mass. For an "under the core" gel time, add approx 5-10 minutes. The Core-Bond and priming resin should gel at about the same time. Verify this under shop conditions using the "Core-Block Test" (refer to ATC Core-Bond Manual).

Core-Bond B70 Catalyzation  
Green BPO Paste Catalyst. 50% - for 50-55 minute gel time in a 100 gram mass\*

Temperature °F °C	Core-Bond B70 "R" (Regular Version)			Core-Bond B70 "S" (Summer Version)			Core-Bond B70 "W" (Winter Version)		
	% BPO (by weight)	cc/Gallon (3.78 l)	gr/Gallon (3.78 l)	% BPO (by weight)	cc/Gallon (3.78 l)	gr/Gallon (3.78 l)	% BPO (by weight)	cc/Gallon (3.78 l)	gr/Gallon (3.78 l)
55 13							3.50	78.5	92.6
60 16							2.60	58.3	68.8
65 18	3.30	74.0	87.3				2.15	48.2	56.9
70 21	2.50	56.1	66.2				1.85	41.5	49.0
75 24	2.10	47.1	55.6	3.10	69.5	82.0	1.50	33.6	39.7
77 25	2.00	44.8	52.9	2.50	56.1	66.2			
80 27	1.75	39.2	46.3	2.10	47.1	55.6			
85 29	1.45	32.5	38.4	1.95	43.7	51.6			
90 32				1.75	39.2	46.3			
95 35				1.50	33.6	39.7			

\* Allow an additional gel time of approx 5-10 minutes in the core installation (Core-Block Test). Please adjust gel times for Core-Bond and the Priming Resin to shop conditions using this chart as a guideline. Chart based on B70 (0.7 g/cc) and BPO/5 (1.15 g/cc)

### **BPO Catalyzation with the calibrated Dispenser**

The dispensers are calibrated with a 10-60 cc scale so that one gallon (3.78 liters) can be catalyzed at a time. The dispensers are made from polyethylene and can be cleaned with a soft cloth or paper. **DO NOT LEAVE IN ACETONE, STYRENE, MEK, OR OTHER SOLVENTS.** Dispensers are available through your SB-ATC distributor.

### **Priming the Core**

Priming the core is a necessary step which achieves the required bond strength. The resins used are normally low styrene content (below 40%) medium to high reactivity GP/ortho resins, ortho/DCPD blends. Iso and vinylester resins may not work as well, especially in higher temperatures, as they can force styrene or styrene vapors into foams or balsa causing bond line undercure. To check the priming resin suitability, make a Core-Block Test as described in the ATC "Core Bond Manual". SB-ATC also supplies a designated priming resin, (which can also be used as a core surface sealing

- or hot coating resin). This is recommended when hot and humid shop condition exist. The priming resin needs to be catalyzed for a 15 minute gel time in a 100 gram cup for the temperatures listed in the Core-Bond catalyst chart. Please follow the MEKP catalyst levels recommended by the priming resin manufacturer. The objective is for the priming resin to catalyze in a thin film on the core material surface at about the same time as the Core-Bond. Refer to the Technical Data Sheet for the ATC Priming Resin.

### **Spreading Core-Bond with a notched Trowel**

Core-Bond should be spread with a notched trowel, the ideal configuration has 1/4" (6mm) equilateral triangles. For contour-cut foams or balsa, as additional material maybe needed to fill the kerfs that open up in a curved section. The stainless steel ATC trowels are available through your SB-ATC distributor.

### **Core Installation**

Please refer to the "ATC Core-Bond Manual" for proper installation procedure and contact an SB-ATC representative for vacuum-bagging recommendations specific to the core being used. For temperatures outside the listed range, consult SB-ATC. Stir Core-Bond well with large blade mechanical mixer before and after adding BPO catalyst. Also stir BPO catalyst before use.

### **Storage/ Shelf Life**

For maximum shelf life, store Core-Bond and BPO catalyst in a cool, dry area, maintaining the temperature between 10 - 20° C (50-70°F). This would also extend the gel time in warm climates as the material starts out cool when used. Avoid storing in heat or direct sunlight. If stored in a cold area, let Core-Bond reach shop temperature. The shelf life is 12 months under recommended storage conditions. After this time a gel time test is recommended to assure usability. Do not store BPO catalyst above 80°F.

### **Core-Bond B71/75 sprayable Versions with MEKP Catalysts**

The pumpable version of Core-Bond B70 is Core-Bond B73, supplied in drums, to be dispensed with internal mix equipment. Dispension guns are supplied by Magnum Venus Products, [www.mvpind.com](http://www.mvpind.com); GS Manufacturing, [www.gsmfg.com](http://www.gsmfg.com); Glas-Craft, [www.glascraft.com](http://www.glascraft.com). Core-Bond B73 uses a 40% BPO catalyst (please contact us for details about the catalyst). Please refer to Core-Bond B73 Technical Data Sheet.

NOTICE: All precautionary labels and notices should be read and understood by all supervisory personnel and employees. Consult OSHA and government regulations for additional safety and health information. Purchaser is responsible for complying with all federal, state, or local laws and regulations covering the use of this product. The information contained herein is correct to the best of our knowledge. Please check our website for latest updates. The recommendations or suggestions contained in this bulletin are made without guarantee or representation as to results. We suggest that these recommendations and suggestions are evaluated by the purchaser's technical staff prior to use. Our responsibility for claims arising from breach of warranty, negligence, or otherwise is limited to the purchase price of the material. All values can be revised due to ongoing testing and are subject to change without notice.

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