

# CORE-BOND® B73

## Sprayable/Pumpable Polyester-based Core Adhesive for Foams and Balsa

### Introduction

Core-Bond B73 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 catalyzed with a BPO catalyst and 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 B73 can be sprayed or pumped, can be spread out for a uniform thickness with a ¼" (6mm) V-notch stainless steel trowel and achieves a thin bondline of approximately 1/32"-3/64" (approx. 1mm). One gallon (3.78 liters) covers approx. or 30 square feet (3m<sup>2</sup>). 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 cores, or in the bleeder holes of plain core sheets for a visual inspection of a good bond. Core-Bond B70 is used for hand application, B71/75 are sprayable versions using MEKP. (Page 2)

### General Properties

|                            |   |
|----------------------------|---|
| Color                      | White                                   |
| Density                    | 0.75 -0.82 g/cc (6.25-6.83 lbs./gallon) |
| Compression strength       | 1800 psi                                |
| Deformation before rupture | 9.8%                                    |
| Shrinkage                  | Less than 1%                            |
| Thixotropy                 | Non – Sagging                           |
| Capillary absorption       | None, non-porous surface                |
| Water absorption           | Less than 1%                            |
| Viscosity                  | 112,000 - 128,000 cps                   |

Installing a core material with Core-Bond B73 is a 2-part system consisting of Core-Bond, which is catalyzed with a BPO/4 (40% benzoyl peroxide, such as Benox L-40LV ([www.norac.com](http://www.norac.com)) or equal, white paste catalyst, and a GP (ortho) laminating resin for priming the foam core, which is catalyzed with an MEKP DDM-9 (or equal) catalyst. A green pigment can be added to the white BPO catalyst for easier identification that the catalyst is well dispersed (Please contact us). The catalyzed instructions below for a 50-55 minute 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 B73 Catalyzed Chart  
(incl. Magnum Venus Slave Arm Settings, BPO 40% Catalyst, for 50-55 Minute gel time in a 100 gram mass\*)

| Temperature<br>°F      °C | Core-Bond B73 "R"<br>(Regular Version) |                         |                     |                             | Core-Bond B73 "S"<br>(Summer Version) |                         |                         |                             | Core-Bond B73 "W"<br>(Winter Version) |                         |                     |                             |
|---------------------------|--|-------------------------|---------------------|-----------------------------|---------------------------------------|-------------------------|-------------------------|-----------------------------|---------------------------------------|-------------------------|---------------------|-----------------------------|
|                           | % BPO<br>(weight)                      | cc/Gl<br>n.<br>(3.78 l) | gr/Gln.<br>(3.78 l) | MVP<br>Slave<br>Arm<br>Stg. | % BPO<br>(weight)                     | cc/Gl<br>n.<br>(3.78 l) | gr/G<br>ln.<br>(3.78 l) | MVP<br>Slave<br>Arm<br>Stg. | % BPO<br>(weight)                     | cc/Gl<br>n.<br>(3.78 l) | gr/Gln.<br>(3.78 l) | MVP<br>Slave<br>Arm<br>Stg. |
| 55      13                |  |                         |                     |                             |                                       |                         |                         |                             | 3.90                                  | 85                      | 102                 | 2 1/4                       |
| 60      16                |  |                         |                     |                             |                                       |                         |                         |                             | 3.10                                  | 69                      | 83                  | 1 3/4                       |
| 65      18                | 3.90                                   | 85                      | 102                 | 2 1/4                       |                                       |                         |                         |                             | 2.70                                  | 59                      | 71                  | 1 1/2                       |
| 70      21                | 3.25                                   | 71                      | 85                  | 1 3/4                       |                                       |                         |                         |                             | 2.25                                  | 49                      | 59                  | 1 1/4                       |
| 75      24                | 2.70                                   | 59                      | 71                  | 1 1/2                       | 3.90                                  | 85                      | 102                     | 2 1/4                       | 2.00                                  | 43                      | 43                  | 1                           |
| 80      27                | 2.20                                   | 48                      | 58                  | 1 1/4                       | 3.10                                  | 69                      | 83                      | 1 3/4                       |                                       |                         |                     |                             |
| 85      29                | 1.90                                   | 41                      | 49                  | 1                           | 2.70                                  | 59                      | 71                      | 1 1/2                       |                                       |                         |                     |                             |
| 90      32                |  |                         |                     |                             | 2.25                                  | 49                      | 59                      | 1 1/4                       |                                       |                         |                     |                             |
| 95      35                |  |                         |                     |                             | 2.00                                  | 43                      | 52                      | 1                           |                                       |                         |                     |                             |

\* 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 B73 (0.78 g/cc) and BPO 40% (1.35 g/cc)

## Dispersion Equipment

Core-Bond B73 is supplied in drums. Internal mix dispersion equipment is manufactured 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).

## 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 reactivity GP/ortho resins, ortho/DCPD blends, vinyl ester resins, and vinyl ester/DCPD blends. Iso resins may not work as well, especially in higher temperatures, as they can force styrene into foams or balsa causing bondline 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, ATC Priming Resin (which can also be used as a core surface sealing - or hot coating resin). This resin is recommended especially 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. 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. Please refer to the

## Spread 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 may be needed to fill the kerfs that open up in a curved section. The trowels are available through your

## Core Installation

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. It is not normally necessary to agitate the material in the drums before use. However, it is recommended to occasionally stir the BPO catalyst before use.

## Storage

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.

## Shelf-Life

Core-Bond B73, following recommended storage conditions, has a 12 months shelf life. We recommend gel time tests at all times, but after 12 months a gel time test will indicate the useability of the material.

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

There are two sprayable versions of Core-Bond for use with a MEKP catalyst, Core-Bond B71 (18-24 minute gel time) and Core-Bond B75 (35-45 minute gel time). Please refer to Core-Bond B71/75 Technical Data Sheet.

## Green Catalyst Pigment

A green catalyst dye can be supplied through your SB-ATC distributor. It comes in a 85 gram/container, which is sufficient to pigment 19 liters (5 gallons) of the white BPO paste catalyst.

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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