

Technical Data Sheet

Product Description

CHANNELBAC™ is a NON-Cellular cushioning technology that provides unprecedented print quality and consistency compared to cellular-foam plate mounting tapes. It employs a PSA coated “ribbed” displacement membrane with a differential adhesive system designed for mounting flexographic printing plates to cylinders or sleeves for high quality flexographic printing. This unique technology provides excellent print quality across the broad spectrum of graphic elements (process, combination, large solids, and fine reverse copy) often at improved press speeds and with noticeably reduced press bounce, all consistently reproduced with **a single density compressible layer.**

Product Features

One Density

- The unique patented design of **ChannelBAC™** means that only one density is required to achieve optimum print quality for process images, combination images, fine lines and solid print without needing buildup or screening of solids.
- Typically, deciding on the correct density of cellular foam needed to achieve optimum print is based on evaluating the graphic elements contained on a particular plate. With **ChannelBAC™**, no advance decision is needed. The increased resistance needed at the print surface is simply a matter of increasing plate impression. This effectively changes the cushioning resilience of the plate resulting in exceptionally wide impression latitude. And, since **ChannelBAC™** is crush proof, the most “heavy handed” operators will not damage the cushion with over impression.
- The exceptionally wide latitude inherent in **ChannelBAC™** provides the ability to optimize to “A” grade UPC reproduction on press.

Durability and Increased Plate Life

- The solid elastomeric ribs that provide the cushioning will not crush or lose gauge throughout the longest runs - the cushioning properties are guaranteed to out-live the printing plate. Due to the effectiveness, durability and consistency of the cushion, plate life is often increased by 50% or more.

Shock-Absorbing Capability

- The unique patented design and proprietary materials increase **ChannelBAC™**'s shock absorbing efficiency by over 30% compared to cellular-foam mounting materials. This effectively reduces and, in most cases, eliminates press bounce. The result is uncompromised print quality not obtainable when using cellular foam on bounce prone jobs.

Quality and Consistency Built In

- **ChannelBAC™** is “made to tolerance” - NOT “ground to tolerance”. This results in unparalleled caliper consistency within each roll, from roll to roll, and from lot to lot, thus providing uniform impression setting to optimize print quality.

Mounting Benefits

- The unique design of **ChannelBAC™** prevents air entrapment on the cylinder/sleeve side while its dimensionally stable base allows repositioning without fear of distortion.

Adhesive Options

- **ChannelBAC™** is created with a differential adhesive system that combines a high level of adhesion to the cylinder/sleeve with extremely low initial tack on the plate side, which allows for easy repositioning during mounting.
 - **ChannelBAC™** is available with 2 **plate side** adhesives; “blue” or “pink”:
 - CHANNELBAC™** “blue” has very low initial tack for optimum plate repositioning.
 - CHANNELBAC™** “pink” has higher tack.
 - Both adhesives are designed for use with photopolymer plates and provide excellent holding power on-press. Plates remove cleanly and easily resulting in less plate damage during demount.
- The ribbed side adhesive of **ChannelBAC™** is designed with a high level of bond from the cushion to the surface of the printing cylinder or sleeve providing easy application and repositioning during mounting. When it is time to remove the tape from the surface, the adhesive system (in combination with the low surface area of the ribs) allows for extremely easy and clean removal.

0.020 Gauge Technical Data Sheet (0.508mm)

Typical Construction Materials, Properties, and Physical Performance Characteristics

Note: The following information and technical data is representative; intended for reference purposes and should not be used for specification.

Tape Gauge	Maximum Width	Minimum Width	Lot to Lot Gauge Tolerance
0.0215 Inches 0.546 Millimeters	38 Inches 965.2 Millimeters	18 Inches 457.2 Millimeters	+/- .00075 +/- .019 Millimeters
Roll Length	Slitting Tolerance	Print Types	PET Film Release Liner Gauge
25 Yards 22.9 meters	±3/64 or 0.047 Inch ±1.194 Millimeters	Tone, fine line copy, solid, and reverses	0.00150 Inches 0.0380 Millimeters
Plate Side Adhesive	Cylinder/Sleeve Side Adhesive	Base Material	Density w/Adhesive w/o/Liner
Low "blue" / High "pink" Tack, High Bond Acrylic Pressure Sensitive Adhesive	High Tack Acrylic Pressure Sensitive Adhesive	Polyester	0.921oz/ft ³ 26.12(g/ft ³)
Compression @ 1-LB (0.4536k) pressure	Compression @ 4-LBS (0.4536k) pressure	Effective Durometer Range*	Heat Resistance
0.0015 Inches 0.0381 Millimeters	0.0060 Inches 0.152 Millimeters	38 > 68 (Shore A reference)	180°F 82°C

Solvent Resistance

Water	Alkanes	Alcohols	Acetates
Excellent	Excellent	Very Good	Good

Peel Adhesion**

Test method: Peel Adhesion (Modified ASTM-D3330)

PET side (liner-side) to Photopolymer Plate		3-D rib side(non-liner-side)	
"BLUE"	"PINK"	Composite Sleeve	Steel Cylinder
17.0 oz/in (18.6 N/100mm)	10.0 oz/in (11.0 N/100mm)	14.0 oz /10in (15.0 N/1000mm)	12.0 oz /10in (13.00 N/1000mm)

Plate Side Adhesive: "blue" or "pink"

Please note: **ChannelBAC™** plate side adhesive systems handle differently than most cellular tapes.

"BLUE" has *VERY* low tack and is ideal in most press rooms. Despite its extraordinary low tack it has higher adhesion than "PINK". making it easier to reposition plates during mounting. Plate removal is "zippy", clean and easy.

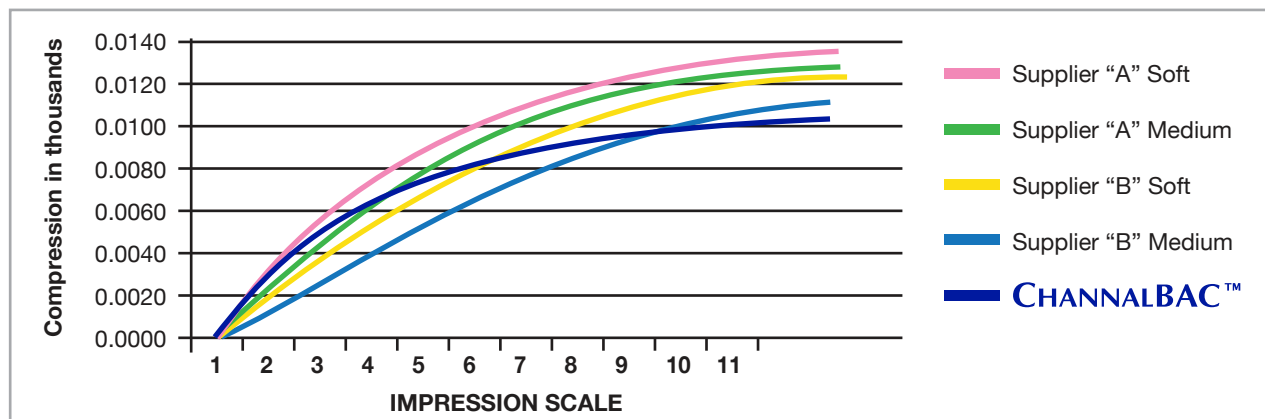
"PINK" has moderate tack and high adhesion. Its high tack and lower peel is preferred in some plant environments. The high tack is found to be a plus when handling large plates during plate mounting. With lower plate peel, plate removal occurs with less stress, further reducing the likelihood of plate damage.

* Traditional durometer references do not accurately reflect firmness when measuring displacement cushions. Compression is the relevant reference since firmness is directly related to print impression (compression).

** Proprietary Process based on values off steel cylinder and composite sleeve. CDT's peel adhesion values are measured using actual steel cylinder and composite sleeves surfaces to determine peel values. Plate side adhesion shows significant increase with extended time.

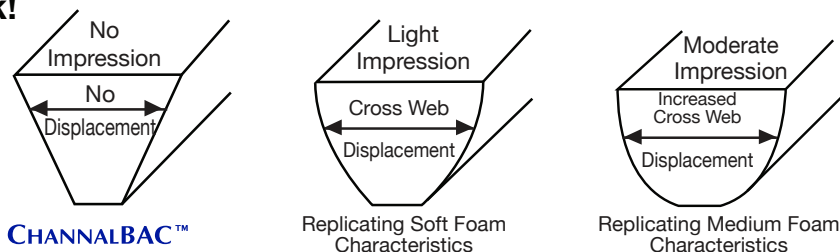
Physical and Functional Comparison

Controlled Displacement™ Technology vs. Cellular Foam

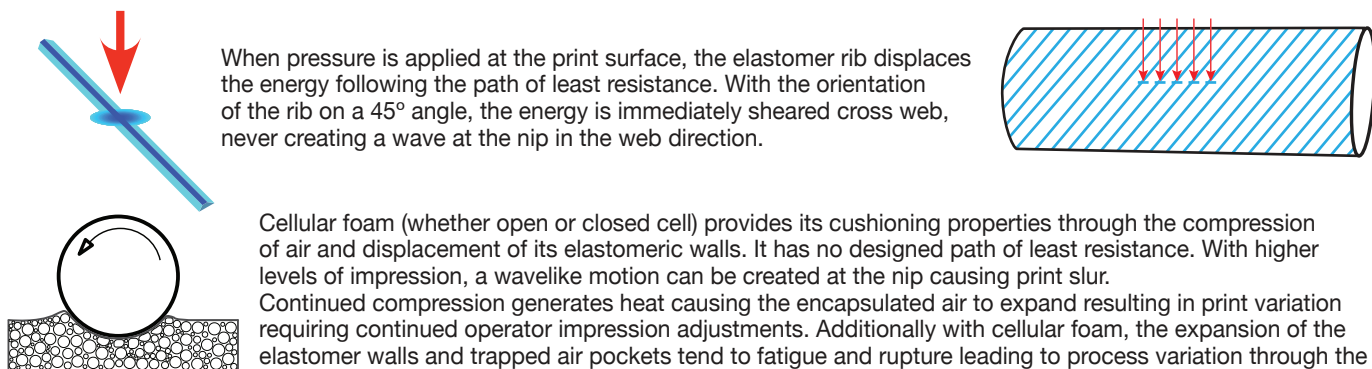


This chart illustrates how ChannelBAC™, "a single compressible layer", can replicate the density of the most commonly used cellular foams just by modifying impression. As you increase plate impression, ChannelBAC™ changes the resistance at the plate's surface without changing or deforming the plate image. This, in essence, replicates the performance characteristics of nearly all density foams *without the need to recharacterize or change the graphic curve.*

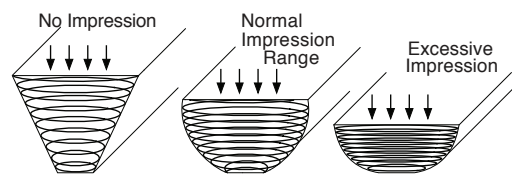
How does it work!



The above illustrations demonstrate how ChannelBAC™ builds resistance at the plate surface as impression increases. The displacement of the solid rib profile (bulge) follows the designed path of least resistance which occurs in the cross web direction, not the cylinder's rotational direction.



ChannelBAC™ is spring like in the way it compresses and absorbs shock, allowing the plate to conform to the substrate and compensating for tolerances in both mechanical and material components in the process. In rare situations (most often due to significant mechanical tolerance errors), when extreme conditions cause it to be compressed to the point where it cannot absorb additional shock, a ghosted image of the ribs will appear in the print. This indication of over impression will not damage ChannelBAC™ or require a remount. Simply reset impression and ink. ChannelBAC™ is guaranteed crushproof!



Technical Information: The technical information, recommendations, and other statements contained in this document are based upon lab tests, customers' comments, print results, and performance characteristics that Controlled Displacement Technologies "CDT" believes are reliable, however, the accuracy or completeness of such information is not guaranteed.

Suitability: Factors beyond the control of CDT, unique within a user's environment and process can affect the product's use and performance. Given the variety of factors that can affect the use and performance of ChannalBAC™, the user is solely responsible for evaluating the product and determining whether it is suitable for a particular purpose and fit for the user's method of application.

Storage conditions: Store in original packaging under ambient conditions between 50° to 85°F (10° to 29°C), relative humidity between 40 - 60%. In the case of long term storage on cylinders/sleeves, spiral wrap the plate and exposed cushion with an opaque film to protect from damage and prevent prolonged exposure to UV light.

Shelf Life: Adhesive properties are warranted for initial application within one year from date of purchase.

Performance Guarantee: ChannalBAC™ is guaranteed to be "crushproof". It will maintain gauge uniformity throughout your longest press runs, including plates mounted on sleeves for subsequent runs. The plate may wear causing print defects but ChannalBAC™ will not fatigue or lose gauge. If you believe you experience gauge loss, return the damaged cushion, printing plate, and the printed sample identifying the defect in exchange for a product replacement.

This "Performance Guarantee" covers only wear in the ordinary course of printing, and does not cover physical destruction due to press mishaps or abuse. If there is a return under this "Performance Guarantee" contact your sales or customer service representative for an authorization return number.

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