

SUBJECTIVE BONDING STUDY

PRODUCTS TESTED

Griswold Microcellular Polyurethane Products

Enlighten-u U7B21 Black, U7H15 Black, U7R15 Black, U7Y20 Black

SETUP AND TESTING

Adhesive systems (see charts below) were backed with 1 mil PET film (liner-side for double-coated products) and trimmed to 1 inch width. 2 sample sets were laminated to customer-supplied materials. One set laminated at Room Temperature and one set using 180°F Heat Assist. Sample were conditioned as follows and subjectively evaluated:

5D @ RT = Samples conditioned at room temperature for 5 days and evaluated.

SUBJECTIVE RATING SYSTEM

- EXCELLENT:** Completely destructive bond and/or substantial force required to remove adhesive from material.
- VERY GOOD:** Substantial Destruction to surface of material and/or significant force required to remove adhesive from material.
- GOOD:** Partially destructive bond and/or moderate force required to remove adhesive from material.
- FAIR:** Non-destructive bond to material but moderate force required to remove adhesive

SYMBOLS

HEAT ASSIST NECESSARY	Δ Bond demonstrated improvement after accelerated aging noted (time and temp)
HEAT ASSIST BENEFICIAL	D Discoloration of adhesive noted after accelerated aging noted
S Indicates Product Series	OG Outgassing
LAM Lamination Temperature	L- Minor Legging L Moderate Legging L+ Major Legging
RT Room Temperature	

Foam Bonding evaluations are affected by foam thickness and integrity. Adhesion to foam and rubber products are affected by factors including material thickness and density, lamination speed, temperature, and compression. Bond strength observed immediately after lamination is often not a reliable indicator of long term adhesion or compatibility. Results being provided as a guide to product selection; products should be thoroughly tested to application materials applied using intended production equipment and practices and evaluated in conditions reflecting intended use.

Data presented are typical properties taken from a limited number of production runs, and should not be used for specification purposes. Berry Global, Inc. makes no warranty expressed or implied, and specifically disclaims and disavows any implied warranty or merchantability and of fitness for a particular purpose. Berry also is not responsible for formulation changes in products that could impact the bonding ability of the Berry materials tested. Accordingly, all Berry products are sold with the understanding that purchasers will be solely responsible for determining the suitability of the materials for any purpose.



Results: 5 DAYS @ ROOM TEMPERATURE

		Griswold Microcellular Polyurethane Products												
		U7B21 BLACK		U7H15 BLACK		U7R15 BLACK				U7Y20 BLACK				
COND:		5D @ RT		5D @ RT		5D @ RT				5D @ RT				
LAM:		RT	180°F	RT	180°F	RT		180°F		RT		180°F		
SUBJECTIVE RATING	EXCELLENT	5944M 650 S 7744	2016M 2237M 5944M 650 S 7744	650 S	2016M 650 S	2016M 2237M 650 S 5008B 5000M 5944M 4377M 250 S 353M	488M 4787M 4628 730 7332 7511 7603 7744 7800 S	2016M 2237M 650 S 5000M 5944M 4377M 250 S 353M 6849	488M 4787M 4628 730 7332 7511 7603 7744 7800 S					
	VERY GOOD	2016M 7854	353M 4628	2016M 5944M 353M 7603 7744 7834	5944M 4377M 4628 353M 7332 7511 7603 7744 7832 7834					2016M		2016M		
	GOOD	7832 7834 353M 4628 730	256M 488M 5000M 730 7832 7854	4377M 7854 7832 4628 730 7332 7511	2237M 4787M 254M 256M 5000M 7854 730		7854 6849				4787M 7854 7744		4787M 7744 7854	
	FAIR	4377M 488M 5000M 7332 7511	254M 4377M 7332 7511 7603	2237M 4787M 254M 256M 488M 5000M 5008B 6849	488M 5008B 6849				5008B		2237M 650 S 5008B 5000M 5944M 4377M 250 S 353M	488M 4628 730 7332 7511 7603 7832 7834	2237M 650 S 5008B 5000M 5944M 4377M 250 S 353M	488M 4628 730 7332 7511 7603 7832 7834

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