

ULTRA HIGH BOND

**PRODUCT  
DATA SHEET**

**2045**

ULTRA HIGH BOND BLACK FOAMED  
ACRYLIC TAPE - DOUBLE SIDED

**DESCRIPTION**

Tapespec 2045 UHB Foamed Acrylic Double Sided tape has excellent dimensional stability & strength. The durable closed cell foamed acrylic carrier is coated both sides with a high bond, long life modified acrylic adhesive. Used as a permanent adhesive system for both interior and exterior applications. Resistance to most solvents, temperature extremes and UV light.

<b>THICKNESS</b>	1.1 MM
<b>CORE / CARRIER</b>	STRONG DENSITY
<b>ADHESIVE</b>	BLACK FOAMED MODIFIED ACRYLIC
<b>RELEASE LINER</b>	RED PE RELEASE LINER



**FEATURES**



**SUPER STRONG**

Excellent conformability, durability, dimensional stability & strength.



**EXCELLENT SOLVENT & CHEMICAL RESISTANCE**

Excellent resistance to most solvents & chemicals.



**VERY GOOD TEMPERATURE RESISTANCE**

Very good temperature resistance ( up to 149°C for short periods).



**ROHS COMPLIANT**



**UV & WEATHER RESISTANCE**

Excellent UV & weather resistant properties. Creates a permanent seal against water and moisture.



**FOAMED ACRYLIC TECHNOLOGY**

World leading innovation. Permanent, long life.



**EXCELLENT SHOCK ABSORPTION**

Excellent shock & vibration absorption. Dynamic loading, expansion and contraction.



**MANUFACTURES CERTIFICATION**

KS ISO 14001: 2009/ISO - 14001: 2004  
KSQ ISO 9001: 2009/ISO - 9001: 2008  
Please contact us for UL ratings.

**TYPICAL APPLICATIONS**

- A Multi-purpose UHB product with excellent adhesion to a wide variety of surfaces, especially HSE substrates such as metal, glass, many plastic (polycarbonate, ABS, rigid PVC & acrylic) & composites.
- Suited for use in many interior & exterior industrial applications.
- Used in many industrial application to replace or work in conjunction with rivets, screws, spot welds & liquid adhesives.
- Excellent bonding to clean aluminium & steel surfaces, glass & a wide variety of plastic substrates - (such as acrylic & polycarbonate).
- Good dimensional stability for effective sealing and bonding.
- For bonding automotive & decorative trim, bonding panels to metal frames & onto glass substrates.
- Adhesion to HSE (High surface energy substrates) - High
- Adhesion to LSE (Low surface energy substrates) - Medium

## ADVANTAGES

### QUICK & EASY TO USE

No clean up mess which occurs with liquid adhesives.

### ECONOMICAL

Preparation time is minimal.  
Installation is faster & waste is reduced.

### SLIT TO SIZE IN NZ

Roll widths are slit to required sizes in New Zealand. Fast delivery to site throughout New Zealand.

### FREE TECHNICAL ADVICE

Free technical assistance, samples and advice available throughout NZ from the tape spec sales team.



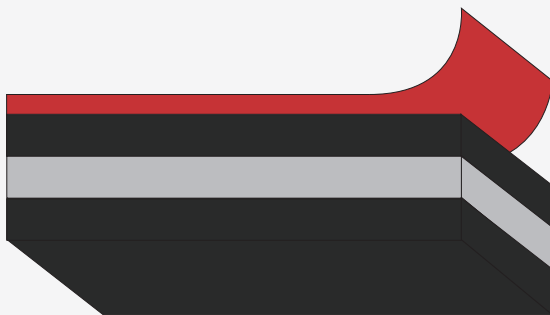
## PRODUCT

### UHB (ULTRA HIGH BOND) BLACK FOAMED ACRYLIC DOUBLE SIDED TAPE

**Note:** Testing is always recommended on all surfaces for suitability.

A primer system maybe required for bonding to LSE substrates. Rolls can slit to various width sizes to suit the application.

## UHB 2045 TAPE STRUCTURE



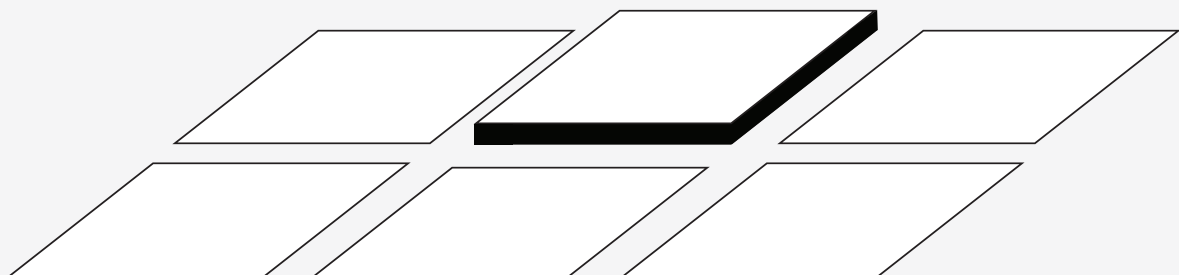
Red PE Release Liner

Black Foamed Modified Acrylic Adhesive

Acrylic Foam Core / Carrier

Black Foamed Modified Acrylic Adhesive

## DIECUTTING



Suitable for die cutting applications - contact tapespec for further details.

## QUICK GUIDE TO SUCCESSFUL APPLICATION OF UHB



01

### CLEANING

Very Important to surface CLEAN with 50/50 mix of IPA & water before application of the UHB tape (wipe surface clean afterwards).

02

### TEST SUBSTRATE

Before applying UHB, always test the substrates for surface energy compatibility & any contamination. Use the first 100mm of the roll on the surface.

03

### ABRADE

This step is only necessary if Low Surface Energy or contamination is present. Lightly scuff the substrate surface & wipe the surface clean afterwards.

04

### PRIMER / ADHESIVE PROMOTER

Used mainly for Low Surface Energy substrates to ensure maximum bonding performance.

05

### APPLYING UHB

Do not stretch the UHB & apply rubbing down hand pressure on application. Ideally use a hand pressure roller - recommended pressure should be approx. 15 PSI.

06

### APPLICATION TEMPERATURE

Optimum air temperature on application should be +15c to +30c. Ensure the substrates are not cold to touch when applying the UHB tape.

## CURING TIME GUIDE:

This is a rough guide to assist in the process of understanding the time required for the foamed acrylics to reach their max bond strength.



- After 20mins - 50%
- 1 Hour - 75%
- 1 Day - 90%
- 3 Days - 100%

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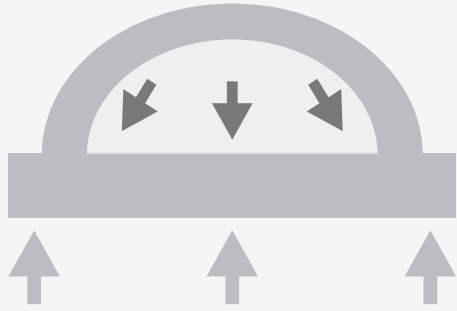
In consideration of the curing time it is important not to put the bond under immediate stress or loading. Where this is not possible please consider using either mechanical clamps temporarily or use a greater amount of tape to compensate for any extra loading.

It maybe also be possible to use other tapes such as masking or cloth tapes to temporarily assist in supporting structures while curing is taking place.

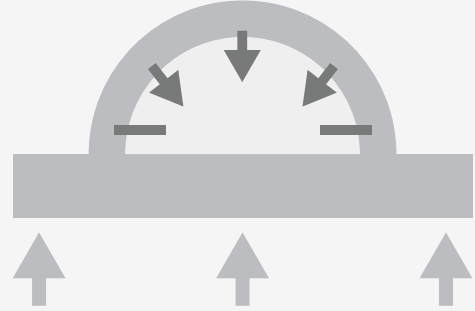
## DIFFERENT SUBSTRATES & RELATIVE SURFACE ENERGY GUIDE

**NOTE:** This relates to the UHB foamed acrylic chart on previous page.

High Surface Energy  
Easy to adhere  
Good adhesive "wet out"



Low Surface Energy (LSE)  
Hard to adhere  
Poor adhesive "wet out"



### BOND TO:

← EASY ————— HARD →

HIGH SURFACE ENERGY (HSE)	MEDIUM SURFACE ENERGY (MSE)	LOW SURFACE ENERGY (LSE)
<b>Stainless Steel</b>	Acrylic	Polyethylene
<b>Aluminium</b>	Rigid PVC	Polypropylene
<b>Glass</b>	Polycarbonate	Silicone
<b>Anodized Aluminium</b>	ABS	Acetate
<b>Zinc</b>	Polyester	Teflon
<b>Cooper</b>	Nylon	Tedlar
<b>Lead</b>	Kapton	Polystyrene
<b>Painted Metal (not powder coated)</b>	Epoxy & PU Paint	EVA
	Powder Coated Metal	

**NOTE:** The higher the surface energy, the greater the strength of adhesion.



## TECHNICAL INFORMATION

Carrier	Foam Acrylic - Coated both sides with Modified Acrylic Adhesive.		
Adhesive	Modified Acrylic Adhesive		
Colour	Black		
Release Liner	Red PE Film Liner		
Thickness	1.1 mm (tolerance + / - 10%)		
Density	Firm - 930 Kg/m <sup>3</sup>		
UHB Curing Time Guide	20 mins - 50% 1 hour - 75% 1 day - 90% 3 days - 100%		
Adhesion to steel	20 min (RT) 2000 gf/10mm 24 hrs (RT) 2200 gf/10mm 250hrs 80°C 1800 gf/10mm 250hrs -20°C 1600 gf/10mm		
180° Peel Adhesion Power Test - bond at (RT) room temperature & test after 30 hours.	Speed: 300+/- 10mm/min Tape Width: 10mm Backing: 25 micron polyester film		
Static Shear	Temperature	Load	Result
Measured at various temperatures & gram loadings on stainless steel. 3.22 cm <sup>2</sup> overlap. Holding a load for 7 days	93°C	500g	OK
	120°C	250g	OK
Dynamic Shear	RT 20 mins	7.5 kgf/cm <sup>2</sup>	
Measurement of the bonding load at room temperature - after 30 mins. Speed: 200+/- 10mm/min Tape Width: 10mm x 10mm Backing: 75 micron polyester film	RT 24 hrs	7.9 kgf/cm <sup>2</sup>	
	RT 48 hrs	8.2 kgf/cm <sup>2</sup>	
	RT X 100%		
	RH 250 hrs	8.5 kgf/cm <sup>2</sup>	
	80°C 250 hrs	8.6 kgf/cm <sup>2</sup>	
	-20°C 250 hrs	8.1 kgf/cm <sup>2</sup>	
Temperature Resistance	H/Rate = 120°C Range: - 40°C to + 120°C & 149°C (for short periods)		
Temperature measurement - bonding tape at room temperature & for 1 hour with a weight - 500g & in an oven. Increase of temperature 3°C every 5 min & record falling temperature. Substrate: Stainless Steel Tape Width: 20mm x 20mm Backing: 75 micron polyester tape	Note: All installation instructions must be followed to ensure correct tape to surface bond.		
Storage Temperature	12°C to 25°C - not in direct sunlight.		
Shelf Life	12 Months - from date of manufacture.		
Roll Size	33 meter length		

**Slit to various width sizes as required.**

NOTE: We recommend tape product testing to assess the suitability of the selected product to the end application & conditions. For surface preparation and guidelines please refer to our website [www.tapespec.co.nz](http://www.tapespec.co.nz) Advanced Tape Application Guide.

## SURFACE SUBSTRATE CONDITION & PREPARATION

The surfaces to be bonded must be dry & free from any contamination including dust, oils, & fats, oxidation, release agents & any other known contamination.

The correct choice of surface cleaner depends on the surface properties. Essentially non-greasy cleaners are recommended including isopropanol alcohol (mixed 50/50 with clean water). Cleaning cloths must be clean, grease & fat free with no loose fibres or cloth particles.

The bond strength is dependent upon the contact pressure of the adhesive to substrate. To assist this process all adhesive tapes require firm hand or roller pressure.

## BONDING APPLICATION TEMPERATURE

We recommend that the product, substrate & environment should be between +15°C & 25°C. Ensure that the adhesive product & substrates are allowed time to adjust to the environment temperature before bonding.

For product storage we recommend that products are stored in their original packaging under dry conditions, ideally at room temperature but not warmer than +30°C. High relative humidity & direct sunlight must be avoided at all costs. For more detailed handling instructions please refer to our comprehensive application guide.

## PRODUCT USE

The information in this guide is based upon our knowledge & practical experience. This data is intended only as a source of information given without guarantee & does not constitute a warranty.

Due to the wide variety of possible uses & applications, customers should independently determine the suitability of these products for their specific purpose, prior to use. Trial samples are provided free of charge & without obligation.

For detailed surface preparation & application information please refer to our detailed Surface Condition & Preparation Guide.



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