tapespec
NEW ZEALAND TAPE SPECIALISTS

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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.

THICKNESS	1.1 MM
CORE / CARRIER	STRONG DENSITY
ADHESIVE	BLACK FOAMED MODIFIED ACRYLIC
RELEASE LINER	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
RoHS Compliant

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

FOAMED ACRYLIC TECHNOLOGY
ACRYLIC ADHESIVE

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

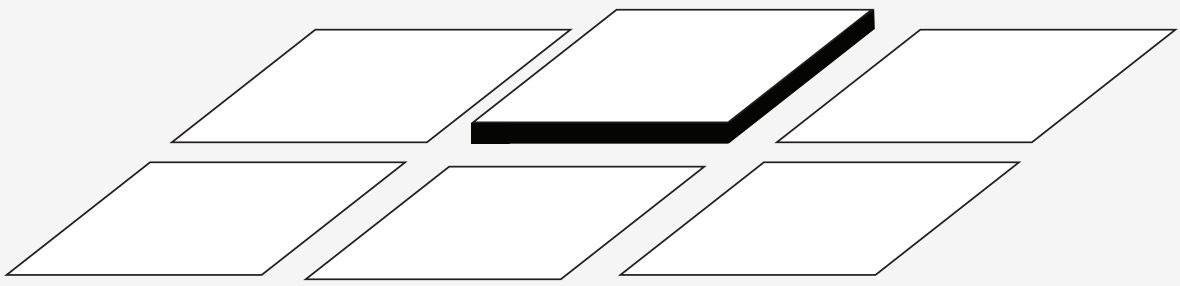
UHB (ULTRA HIGH BOND)
BLACK FOAMED ACRYLIC
DOUBLE SIDED TAPE

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

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%**

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.

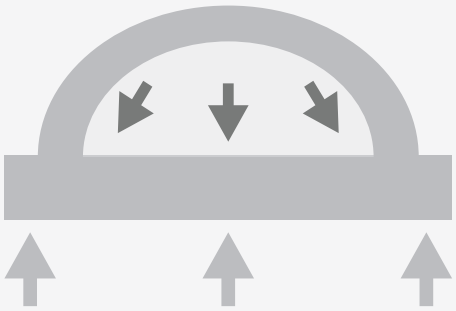
In consideration of the curing time it is important not to put the bond under immediate stress or loading. Where this is not possible please consider using either mechanical clamps temporarily or use a greater amount of tape to compensate for any extra loading.

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.

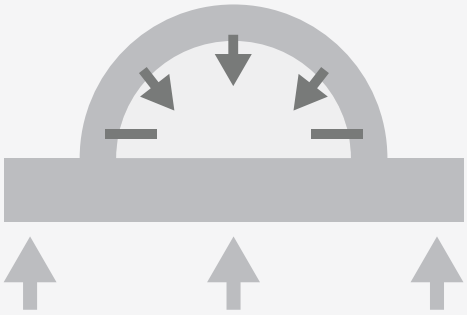
DIFFERENT SUBSTRATES & RELATIVE SURFACE ENERGY GUIDE

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
Hard to adhere
Poor adhesive “wet out”



BOND TO:

← EASY — HARD →

HIGH SURFACE ENERGY (HSE)	MEDIUM SURFACE ENERGY (MSE)	LOW SURFACE ENERGY (LSE)
Stainless Steel	Acrylic	Polyethylene
Aluminium	Rigid PVC	Polypropylene
Glass	Polycarbonate	Silicone
Anodized Aluminium	ABS	Acetate
Zinc	Polyester	Teflon
Cooper	Nylon	Tedlar
Lead	Kapton	Polystyrene
Painted Metal (not powder coated)	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/m3
UHB Curing Time Guide	20 mins - 50% 1 hour - 75% 1 day - 90% 3 days - 100%
Adhesion to steel 180° Peel Adhesion Power Test - bond at (RT) room temperature & test after 30 hours.	20 min (RT) 2000 gf/10mm 24 hrs (RT) 2200 gf/10mm 250hrs 80°C 1800 gf/10mm 250hrs -20°C 1600 gf/10mm Speed: 300+/- 10mm/min Tape Width: 10mm Backing: 25 micron polyester film
Static Shear Measured at various temperatures & gram loadings on stainless steel. 3.22 cm^2 overlap. Holding a load for 7 days	Temperature / Load / Result 93°C / 500g / OK 120°C / 250g / OK
Dynamic Shear 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 20 mins 7.5 kgf/cm^2 RT 24 hrs 7.9 kgf/cm^2 RT 48 hrs 8.2 kgf/cm^2 RT X 100% RH 250 hrs 8.5 kgf/cm^2 80°C 250 hrs 8.6 kgf/cm^2 -20°C 250 hrs 8.1 kgf/cm^2
Temperature Resistance 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	H/Rate = 120°C Range: - 40°C to + 120°C & 149°C (for short periods) 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_Advanced Tape Application Guide.

SURFACE SUBSTRATE CONDITION & PREPARATION

The surfaces to be bonded must be dry & free from any contamination including dust, oils, & fats, oxidisation, 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.