



# 2-DS-VHB-5810 High Bond Foam

OCTOBER 2022
Supersedes all previous versions

Clear LSE acrylic foam coated with unique specially engineered adhesive to ensure excellent bonding to components with low surface energy without need for primer.



















# **Applications**

- Clear nature of tape makes it ideal choice where a transparent bond is required such as glass & transparent plastics
- → Ideal for fixing & bonding of low surface energy (LSE) substrates such as: ABS, PC, PMMA, PVC and TPO's
- Used in automotive, construction, electronics, engineering, industrial, graphics & signage industries plus many more
- Can be used in bulletproof & laminated safety glazing manufacturing processes where spacer is required



# **Benefits**

- → Easy release liner (ERL)
- → Low surface energy (LSE) self stick adhesive
- → High temperature rating up to 180°C
- → Replaces mechanical fasteners and/or liquid adhesives
- → Vibration dampening
- → Thickness (mm): 1.00 (others available by indent)



### Technical Data

Adhesive power	****	Conformance	RoHS & REACH
• Density - kgs/m³	1020	Liner type	ERL Red PP (Easy Release Liner)
• Tensile strength - N/cm²	80 - 90	Adhesive type	Clear solvent acrylic foam
• Elongation - %	800 +/- 100	Adhesion to steel - N/25mm	54
• Temperature Resistance - °C	-20 to 180	Backing material	Foam-like acrylic glue

The above information is given in good faith for guidance only and not specification purposes. All data is based upon average values, the Purchaser shall be responsible for determining the suitability of this product for their purposes.

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# What is low surface energy?

Understanding the relationship between your substrate/s and the tape being applied to is critical in ensuring the best performance as each persons requirements are unique to them so testing and selection is critical to obtain peak performance.

All substrates exhibit different levels of what is commonly referred to as "surface energy".

So what is "surface energy" when it comes to adhesive tapes? It's the substrates ability to allow the tapes adhesive to bond (wet out) to the surface.

Simply put: the higher the substrates surface energy the easier it is for the tape to adhere to the object ensuring a high contact surface area of bond resulting in higher level of tape performance.

The 3 diagrams below demonstrate an adhesive's ability to stick to a surface. With standard adhesives the performance to high surface energy (HSE) is excellent. For standard adhesives with low surface energy (LSE) the performance is poor. For low surface energy (LSE) substrates we recommend application of our LSE adhesive range to ensure excellent bond strength.



Excellent wet-out
BOND STRENGTH TO
"HIGH SURFACE ENERGY"



**LSE** SUBSTRATE

Poor wet-out
BOND STRENGTH TO
"LOW SURFACE ENERGY"



Excellent wet-out
BOND STRENGTH TO
"LOW SURFACE ENERGY"

# Substrate examples

High Surface Energy	Low Surface Energy
Aluminium	Acrylic
Anodized Aluminium	Polyethylene
• Copper	Polystyrene
• Glass	Polyurethane
Stainless Steel	• PVC

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# RECOMMENDED CLEANING & INSTALLATION PROCEDURES

#### \* STEP 1 - SURFACE EVALUATION:

There are numerous types of adhesive tapes, some suited to a variety of uses and others for more specialised individual applications. A thorough evaluation is recommended when bonding to any surface. Porous surfaces such as wood, concrete & brick should be <a href="mailto:smooth">smooth</a> & <a href="mailto:sealed">sealed</a> with an appropriate sealer prior to application.

All adhesive tapes should only be applied to clean & dry surfaces. There are various methods of preparation depending on the surface and/or application. For technical advice we recommend you speak with our local sales office.

#### Surfaces must be free of:

Any Contaminants
Moisture & Chemical Residue
Dust, Fibres, Concrete Powders, Sand, Soil & Dirt Particles
O.E.M. Cleaners, Grease, Wax, Detergent & Release agents on plastic profiles/extrusions etc
Flaking Paint & Corrosion

#### \*STEP 2 - CLEANING INSTRUCTIONS:

The surface being applied to should be prepared with an appropriate cleaning solution, preferably IPA (Isopropanol) using a clean lint-free wiping cloth or disposable wipe (never re-cycled rags). Renew cleaning cloths regularly. (Applications involving paper, board, fabric etc do not require IPA cleaning)

This should be performed immediately prior to application of adhesive tape.

When using any cleaning solutions it is recommended to test a small area to ensure there is no reaction/discolouration with the surface.

It is important to note that all painted/sealed surfaces should be completely dry/cured. (Refer to manufactures recommendations).

#### \*STEP 3 - INSTALLATION PROCESS:

Once the surface has been adequately prepared tape application can commence. Care should be taken to avoid finger contact with adhesive. The portion of tape held by your fingers should overlap the area being applied to & trimmed, as finger contact with any adhesive tape will significantly reduce its performance.

Both single & double sided tapes require sufficient rub down pressure to ensure 100% surface contact. Where double sided tapes are being used pressure must be re-applied after both surfaces have been brought together.

Surface temperature should be above 10°C at time of application. (Use some heat if necessary - Hair Dryer, Fan Heater etc.).

**NB. Storage** – Ensure all tapes are stored in clean/dry condition & returned to the protective bag between use.

**SPECIAL NOTE:** Adhesive Bond Strength will improve with time varying from a few hours to 2-3 days depending on the adhesive tape product used & climactic conditions.

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# Recommended Storage Conditions

Product must be kept in its original box and packaging in a dry atmosphere away from direct sunlight.

The optimal storage conditions for this product is between 18°C - 22°C with a relative humidity of 40% - 50%.

### Material Safety Data Sheet

MSDS can be downloaded from Stylus Tapes website www.stylustapes.com.au

## Recommended Cleaning & Installation Procedures

#### STEP 1 - SURFACE EVALUATION:

There are numerous types of adhesive tapes, some suited to a variety of uses and others for more specialised individual applications. A thorough evaluation is recommended when bonding to any surface. Porous surfaces such as wood, concrete & brick should be smooth & sealed with an appropriate sealer prior to application. All adhesive tapes should only be applied to clean & dry surfaces. There are various methods of preparation depending on the surface and/or application. For technical advice we recommend you speak with our local sales office. Surfaces must be free of:

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- · Moisture & Chemical Residue
- · Dust, Fibres, Concrete Powders, Sand, Soil & Dirt Particles
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#### Disclaimer

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