ADHESIVE TAPE INSTALLATION GUIDE.
Roofing Iron and Membranes

IMPORTANT NOTES.

- All adhesive bonds are only as strong as the surface they stick to.
- Scotchbrite or sandpaper surface preparation will always increase the bond strength
- The surface must be flat, dry, free of loose corrosion or oxidation, dust, oils and silicone deposits
- Once the surface has been cleaned with isopropyl alcohol or acetone it must be allowed to evaporate fully, any residue will weaken the bond
- All adhesive tapes require pressing firmly to start bonding
- Adhesive tapes are a single use and cannot be repositioned once placed, if placed incorrectly first tape must be completely removed and reapplied
- Aluminium should always be abraded and cleaned before applying tape - Even when new, tape must be applied within 15 minutes of abrading.
- Glass cleaner may be used in place of acetone or isopropyl but care must be taken to ensure the surface is cleaned properly and there is no residue before bonding
- The lower the temperature the slower the cure time. High bond tapes may require heat and primer in low temperatures
- Tape primer will allow sticking to almost any surface if it is clean. (This is an expensive product)

BONDING TO ALUMINIUM.

High Bond (Tesa7078 blue liner) and Touchdown (yellow liner)
Always apply the tape to the aluminium before fitting to the mounting surface.

Warning: Aluminium must be bonded to within 15 minutes of abrading with Scotch-Brite. If the surface is left any longer it must be abraded and cleaned again.

1. Clean the surface that the tape is being adhreed to, with Acetone or Isopropyl alcohol, to remove all grease, oil and contaminants from this area.

2. Using a Scotch-Brite pad, scuff the surface completely so the oxidising layer is removed where the tape is being applied to.

3. Using a clean rag and alcohol or Acetone clean off all the cleaning dust and dirt removed by the Scotch-Brite. Ensuring the surface is completely clean. Allow the cleaner to evaporate fully.

4. Apply the tape starting from one end keep it under slight tension until the liner is just stretching.

5. Press down gently with thumb or roller to remove any air bubbles

6. Press tape down firmly (approx. 15kg force) along the entire surface to activate the adhesive using a roller or similar

FAILS TO STICK?

Note: If the tape fails to bond fully or is moved while curing, the tape must be replaced following the correct procedures from start to finish.

Possible causes:

- Cleaner not fully evaporated and dilutes adhesive. Replace the tape and reapply including all steps starting from no. 1
- Smut and swarf from Scotch-Brite abrading not completely removed.
- Tape not pressed firmly to activate adhesive. It must have at least 15kg of force (5kg/cm^2) over the whole area.
- Surface too cold. To stick the adhesive must “flow” and fill the pores of the surface. For high bond tapes (Blue liner) the temperature must be at least 10°C. At 15°C it will take 3 days to flow fully and reach complete strength. This gets progressively slower until at 10°C it will not stick until it is warmed up. Touchdown membrane tape (yellow) will work well at or below 10°C but will take a little longer to get bonded as the surfaces are colder.
- Using tape primer will speed up the adhesion process.

BONDING TO ROOFING IRON.

High Bond (Tesa7078 blue liner)
Always apply the tape to the aluminium before fitting to the mounting surface.

Warning: Aluminium must be bonded to within 15 minutes of abrading with Scotch-Brite. If the surface is left any longer it must be abraded and cleaned again.

1. Without removing the tape liner put components in position and mark around the tape area with a marker pen.

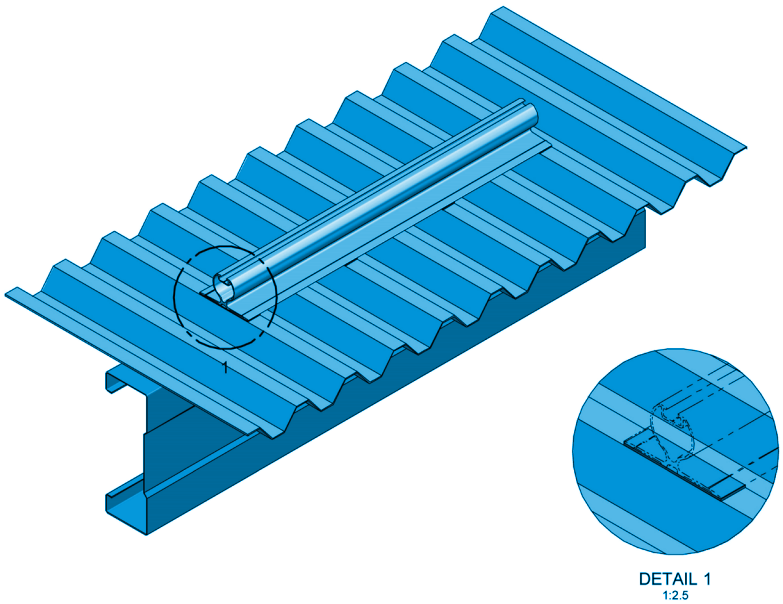
2. Clean the marked area with Acetone or Isopropyl alcohol, to remove all grease, oil and contaminants from the surface that the tape is being adhered to.

3. Using a Scotch-Brite pad scuff the surface. Carefully removing the top layer of weathering or gloss without completely removing the Colorsteel/Colorbond or Zincalume back to the bare metal.

4. Using a clean rag and alcohol or Acetone clean off all the cleaning dust and dirt removed by the Scotch-Brite, ensuring the surface is completely clean. Allow the cleaner to evaporate fully.

5. Once the area is completely dry, remove the tape liner and carefully place the tape component in the marked position. DO NOT MOVE ONCE PLACED.
Using feet or hands and body weight apply firm pressure for at least 30 seconds in each spot along full length of the taped area. Maximum bond strength will be achieved in 3 days at 15°C.

NOTE: Lower temperatures mean it will take longer to achieve full cure strength. In temperatures 10°C or Below use heat and primer for best results. Alternative tapes are available for cold weather cure.



BONDING TO MEMBRANE ROOF SURFACES.

Touchdown tape has been tested and checked for bonding to most mainstream single layer membranes on the market in NZ. These are sometimes generically called “Butynol”.

The following types and brands have been tested and approved:

- Ardex ‘Butynol’
- Adex TPO
- Viking Roofspec Enviroclad TPO (also Known as Carlisle TPO)
- Viking Roofspec Butylclad
- Nuralite Nuraply Everguard TPO
- Waterproofing Systems DuroTUF TPO
- Rooflogic Fibertitie KEE

The following membrane types need to be evaluated on a case-by-case basis:

- All Liquid Applied Membrane Systems
- All PVC Membranes (These are typically used for outdoor decking in high traffic applications)

TORCH ON MEMBRANES:

- Tape on mounting must NEVER be used on torch on membranes.
- These are multi layer membranes that have 2 to 3 layers of membrane 3mm to 5mm thick. They are tar and rubber based, and have a coating normally of light gravel on the top surface.

THINGS TO REMEMBER WHEN BONDING TO MEMBRANES:

- Membranes are on low slope roofs, arrange mounting rails to prevent blocking water flow going towards the gutter.
- The mounting strength will only be as strong as the membrane bond to the wood or concrete underneath. If this is loose or bubbling DO NOT INSTALL.
- Old membrane surfaces that are slimy and weathered should be completely cleaned, dried and the top weathered layer removed with sand paper or Scotch-Brite. 180–300 grit wet and dry sandpaper can be more effective than Scotch-Brite on membranes.
- Rough or bumpy surfaces retain the Acetone or Alcohol Cleaner longer than is visible, especially in colder weather. Allow ample time for full evaporation otherwise the residual fumes will weaken the bond. Avoid using glass cleaner or soap-based products for cleaning such surfaces.
- Uplift tension on the tape and membrane must be avoided or minimised. Do not leave under constant uplift tension. Ensure mounting components are not subject to rocking forces during service. Increasing the tape mounting area with rails being as long and rigid as possible will ensure this.
- Tape surface primer will always improve the bond strength to membrane. This will also allow high bond tape such as Tesa 7078 (Blue liner) to be used in some approved circumstances.
- DO NOT apply tape over joints in the membrane. A gap must be left in the tape in the raised join area, remember this will decrease the overall surface area of tape.
- ANY Penetration in the membrane surface will Void the Manufacturers and installers warranty for the roof unless the roofer has approved and been notified. This can in turn affect building warranties and insurances.

INSTALL PROCEDURE.

1. Without removing the tape liner put components in position and mark around the tape area with a marker pen.

2. Clean the marked area with Acetone or Isopropyl alcohol, to remove all grease, oil and contaminants from the surface that the tape is being adhered to.

3. Using a Scotch-Brite pad scuff the surface. Carefully removing the top layer of weathering or gloss without damaging the integrity of the membrane.

4. Using a clean rag and alcohol or Acetone clean off all the cleaning dust and dirt removed by the Scotch-Brite, ensuring the surface is completely clean. Allow the cleaner to evaporate fully.

5. Once the area is completely dry, remove the tape liner and carefully place the tape component in the marked position. DO NOT MOVE ONCE PLACED.
Using feet or hands and body weight apply firm pressure for at least 30 seconds in each spot along full length of the taped area.

FAILS TO STICK?

Note: If the tape fails to bond fully or is moved while curing, the tape must be replaced following the correct procedures from start to finish.

Possible causes:

- Cleaner not fully evaporated and dilutes adhesive. Replace the tape and reapply including all steps starting from no. 1
- Dirt, Oils, Paints, Silicones or debris from cleaning sanding surface not completely removed.
- Tape not pressed firmly to activate adhesive. It must have at least 15kg of force (5kg/cm^2) over the whole area.
- Tape not in full contact with surface due to undulations or being under tension before fully cured.
- Cold weather takes longer to achieve a cure, do not leave bond under tension while curing.
- Surface is too smooth and shiny; surface must be smooth but lightly scratched so that it is dull.
- Tape primer will always improve adhesive performance especially on smooth shiny surfaces.