# MARSHALL WEATHERIZATION SYSTEM SPECIFICATION

## SYSTEM DESCRIPTION

The Marshall Weatherization System consists of; TEKTON Wall Underlay or HYDRA Wall Underlay. HYDRA Roof Underlay. SUPER-STICK or the Protecto Sill System, TRADE-SEALs and Marshall Construction Tape
The Marshall Weatherization System is used behind wall and roof claddings to form a secondary weather resistant barrier for timber and steel framed buildings.

## SYSTEM PROCESS

The HYDRA Roof Underlay is fixed over the roof framing.

TEKTON or HYDRA Wall Underlay is fixed directly to the outside of the wall framing. The Wall Underlay is cut and fixed to the inside face of the framing to suit the joinery openings prior to the joinery installation.

Tekton Seam Tape is applied to all vertical & horizontal laps in the wall underlay to prevent moisture intrusion and restrict energy loss. TRADE-SEALs are fitted over pipe and conduit penetrations through the building envelope to provide an air and moisture seal.

SUPER-STICK or Protecto Sill System is installed around the joinery openings.

## PRODUCT DESCRITION

**HYDRA ROOF Underlay** is a tri-laminate synthetic, self-supporting roof Underlay. HYDRA Roof is breathable, absorbent & fire retardant.

**TEKTON WALL UNDERLAY** is a non-absorbent, synthetic, breather-type Wall Underlay for use as a flexible wall wrap and air barrier. TEKTON cannot be used behind direct fix non-absorbent claddings.

**HYDRA WALL UNDERLAY** is an absorbent, synthetic, breather-type Wall Underlay for use as a flexible wall wrap and air barrier.

**MARSHALL CONSTRUCITON TAPE** is used to seal vertical and horizontal laps in the wall underlay to prevent moisture entry and also assists with energy efficiency.

**SUPER-STICK** is an aggressive hybrid, high performance window and door flashing tape.

**PROTECTO SILL SYSTEM** is a comprehensive bituminous window & door flashing tape. System comprises of ProtectoSill, ProDetail Tape & Protecto Tak Primer.

**TRADE–SEALs** have a highly elastic EPDM sleeve fitted with a self-adhesive flange that will adhere to most clean and dry substrates. TRADE-SEAL's provide an air and moisture seal around pipes and conduit.

## FEATURES /BENEFITS

### MARSHALL WEATHERIZATION SYSTEM

- A system that combines a range of respected products to form a secure construction envelope.
- Highly compatible product integration.
- A fully BRANZ appraised weatherization system. Can be exposed to UV and weather for up to 60 days.
- A system that combines superior strength, water holdout and flexibility with ease of installation.
- Meets the requirements of the New Zealand Building Code (NZBC) Clause B2 Durability and Clause E2 External Moisture.

### HYDRA ROOF UNDERLAY

- HYDRA Roof Underlay can be used in any wind zones up to and including Extra High.
- HYDRA Roof Underlay is a breathable, self-supporting Tri-laminate synthetic underlay
- HYDRA Roof Underlay is flame retardant with a Flammability Index of ≤5 as per AS1530 Part 2.
- HYDRA Roof Underlay can be exposed to direct UV for 14 days.
- HYDRA Roof Underlay offers GripSpot technology which provides a slip resistant walking surface.
- HYDRA Roof Underlay has HYDRY Technology which prevents moisture from penetrating the roof space at the same time helps release trapped moisture.
- HYDRA Roof Underlay is suitable with pressed metal & masonry tiles.
- HYDRA Roof Underlay is suitable on timber & steel frame.
- HYDRA Roof Underlay is suitable with profiled metal roofing.
- HYDRA Roof Underlay is BRANZ appraised #1071 (2019).
- Not to be used where it is exposed to prolonged direct, indirect or reflected UV such as under unlined canopies, carports, soffits & lean to designs. Warranties are void for these applications.

**HYDRA WALL UNDERLAY (OPTION 1)**

- HYDRA Wall Underlay can be used in all wind zones up to and including very high; and extra high when used with Rigid Air Barrier Systems.
- HYDRA Wall Underlay is an absorbent underlay
- HYDRA Wall Underlay is fire retardant with a flammability index of ≤5 as per AS1530 Part 2 and can be used without restriction on all buildings.
- HYDRA Wall Underlay can be installed as an air barrier to walls that are not lined, such as gable ends.
- HYDRA Wall Underlay can be left exposed for up 60 days.
- HYDRA Wall Underlay is BRANZ appraised #1072 (2019)

**TEKTON WALL UNDERLAY (OPTION 2)**

- Tekton Wall Underlay can be used in all wind zones up to and including very high; and extra high when used with Rigid Air Barrier Systems.
- Tekton Wall Underlay is fire retardant with a zero flammability index and can be used without restriction on all buildings.
- Tekton Wall Underlay can be installed as an air barrier to walls that are not lined, such as gable ends.
- Tekton Wall Underlay has superior water hold out keeping framing drier while permanent cladding is installed.
- Tekton Wall Underlay has 50 year durability.
- Tekton Wall Underlay can be left exposed for up 60 days.
- Tekton Wall Underlay has optimal surfactant resistance (will not lose integrity if exposed to soaps, detergents and cleaning chemicals).
- Tekton Wall Underlay is BRANZ appraised #548 (2019)
- Tekton is a non-absorbent underlay.
- ***TEKTON cannot be used behind direct fix non-absorbent cladding. Non-absorbent cladding must be on a cavity.***

**MARSHALL CONSTRUCITON TAPE**

- High adhesion and tensile strength.
- Wide temperature application range.
- 60 Days UV exposure rating.
- Maximizes energy efficiency by sealing all joints.
- Improves air tightness and contributes to a secondary line of defense against exterior moisture penetration.

**TRADE SEAL**

- Full range of sizes from 8mm to 220mm.
- High adhesion
- Wide temperature application range.
- 90 Days UV exposure rating.
- Trade Seals are BRANZ Appraised #719 (2019)
- Maximizes energy efficiency by sealing around penetrations. Improves air tightness and contributes to a secondary line of defense against exterior moisture penetration.

**SUPER-STICK (OPTION 1)**

- Can be installed in extremely cold conditions to -6º.C
- Easy to install peel-and-stick application
- Very thin, no build up around openings.
- UV resistant for 90 days
- SUPER-STICK is BRANZ appraised #846 (2019)

***Typically will not react with sealants in a wet-seal application. Not suitable over some waterproofing systems at joinery thresholds. Marshall Innovations always recommend checking for compatibility with manufacturers for suitability at any product junctions.***

**PROTECTO WRAP SILL SYSTEM (OPTION 2).**

- Use Protecto Tak Spray with Protecto Sill & Detail Tape
- The tape can be overlapped by 100mm to join to another roll. There is no wastage.
- Protecto Sill System is BRANZ appraised #444 (2017)

***There are known issues with bituminous tapes when forming wet seals at joinery openings. Not suitable over some waterproofing systems at joinery thresholds. Marshall Innovations always recommend checking for compatibility with manufacturers for suitability at any product junctions.***

## DURABILITY

Provided the system is not exposed to the weather or Ultra-violet light for more than 60 days the Marshall Weatherization System will be durable and serviceable for at least 15 years (compatible with that of the joinery).

## SURFACE PREPARATION

Studs must be provided at a maximum of 600mm centres. Nogs must be fitted flush between the studs at a maximum of 1200mm centres. The framing must be free from any sharp protrusions that may damage the wrap.

Where cavity battens are installed at greater than 450 mm centres, the wrap must be supported between the battens to prevent the wrap bulging into the cavity space when insulation is installed.

## INSTALLATION

**HYDRA WALL or TEKTON WALL UNDERLAY**

**HYDRA Wall Underlay is an absorbent underlay and can be used with non-absorbent claddings in a direct fix application.**

**Tekton Wall Underlay is a non-absorbent underlay and cannot be used with non-absorbent claddings in a direct fix application.**

The branded side of the wrap must face away from the framing. The wrap must run horizontally and extend from the upper side of the top plate to the underside of the bearers or wall plates supporting ground floor joists, or below bottom plates on concrete slabs.

Horizontal laps must be no less than 75mm with the direction of the lap ensuring that water is shed to the outside.

End laps must be made over framing and be no less than 150mm wide.

Fix the wrap into place using 6-8mm zinc plated staples, hot dip galvanized large head clouts, tek screws or proprietary wrap fixings.

Wall Underlay can be added as a second layer over head flashings as per E2/AS1 or the head flashing can be sealed to the wrap using 75mm SUPER-STICK.

Position the roll of Wall Underlay against the framing with a short length of wrap free of the roll.

Unroll the wrap across the framing and fix to all framing members at a maximum of 300mm centres.

Keep the wrap straight and taut over the framing.

The wrap should be run over any openings and these should be left covered until the windows and doors are ready to be installed.

To form the openings cut the wrap at a 45 degree diagonal in from each corner. Fold and staple the wrap to the inside of the framed opening. Excess wrap can be trimmed to finish flush with the internal face of the framing.
When fixing wrap in windy conditions, care must be taken due to the large sail area created by the roll widths.

**MARSHALL CONSTRUCTION TAPE**

All vertical & horizontal laps in the wall underlay must be sealed with Marshall Construction Tape. Marshall Construction Tape is applied equally to each side of the lap. Firm pressure is required when applying the tape to ensure adequate adhesion onto the substrate.

**TRADE SEAL**

Select appropriate diameter TRADE-SEAL – Collar should be tight Trade-Seals should never be forced over pipe or conduit.

- Ensure the surface to receive the TRADE-SEAL is clean and dry
- Remove backing paper and slide collar over penetration. Powder or lubricant can be applied to penetration to aid installation.
- Adhere TRADE-SEAL at 45º (diamond style) to aid moisture run off and smooth onto substrate to ensure adhesion.
- Slide the TRADE-SEAL rubber boot along the pipe / conduit to fit within the cavity. The rubber boot should always be concealed from UV.
- Cables should run through conduit. The conduit should be sealed with appropriate expanding foam or sealant to ensure moisture can't enter the building space.

**SUPER-STICK INSTALLATION (OPTION 1)**
**100mm Framing Install with 150mm SUPER-STICK**

- The selected wall underlay must be installed in accordance with the Marshall Innovations Specification. It must completely cover the joinery opening. The wrap is then cut on a 45º angle away from each corner of the opening and secured to the inside of the opening.
- Before SUPER-STICK is applied, all substrates must be clean, dry & free from any surface contaminants such as dust & grease that may affect adhesion. SUPER-STICK is available in 75 mm, 150 mm & 200mm × 23 metre roll sizes.
- Cut 4 - 75 mm wide by 150mm long sealing tape 'butterfly' pieces. Apply 2 strips on the bottom corners at a 45 degree angle.
- Overlap the corner by 3mm to create a seal at the sill/jamb junction.
- Measure and cut a length of SUPER-STICK tape to the length of the sill + 300mm. The tape is installed flush with interior face of the opening & is applied along the entire length of the sill & 150mm up the jambs.
- Measure and mark 150mm up the jambs
- Remove 100mm of the release film off the inside back edge of the SUPER-STICK.
- Align this with the 150mm mark up the jamb and flush with the inside edge of the frame.
- Press the tape firmly onto the wrap and apply down the frame into the corner. Ensure the tape is formed tightly into the corner.
- Continue peeling the release film as you move along being careful to keep the tape aligned to the inside edge. Run tape up the opposite jamb 150mm.
- The overhanging tape is cut at the corners of the opening to allow the tape to be folded onto the face of the wall underlay & butterfly tapes that are already in place.

- Peel off the release backing film & fold down & apply to wall underlay face & over butterfly tapes.
- *Sill & Nail sealability – Apply a layer of 75mm SUPER-STICK over the top of the original flashing tape along the entire length of the sill only. Align the tape to the inside face of the sill. The second layer ensures nail sealability to horizontal surfaces where water may pool & to ensure nail penetrations self-seal.* Alternatively apply 150mm by 150mm squares of SUPER-STICK on top of the original flashing tape on the sill where fixings will penetrate.
- Jamb/head application –Cut 2 pieces of SUPER-STICK at 300 mm. The tape is installed 150mm down the jamb & 150 mm along the lintel at each of the top corners of the window or joinery opening. A 75mm by 150mm long sealing butterfly tape must be installed at 45 degrees across the corner of the head/jamb junction overlapping the corner by 3mm to create a seal at the corner junction.
- 75mm wide SUPER-STICK is used at joinery heads to seal head flashing up stands to the wall underlay.
- This piece is cut 100 mm longer than the flashing & is to run past each end of the flashing by 50 mm.
- As SUPER-STICK is a pressure sensitive tape, after application ensure all the tape is pressed firmly onto the substrate.

**150mm Framing Install with 200mm SUPER-STICK**

- Cut 4 strips of 75mm x 200mm Super Stick. Apply 2 butterfly strips at a 45 degree angle to the 2 bottom corners only. Overlap the corner by 3mm to create a seal at the sill/jamb junction.
- Measure the length of the sill and cut a piece of SUPER-STICK 400mm longer than the length of the sill.
- Measure and mark 200mm up the jamb.
- Peel 100mm off the inside release film and apply the SUPER-STICK at the 200mm mark up the jamb. Continue to remove the release film as the SUPER-STICK is applied; ensuring tape is aligned with the inside of the joinery opening and care to ensure SUPER-STICK is formed tightly into the corners at the sill/jamb junction. Continue removing.
- Release film as SUPER-STICK is applied along the length of the sill and 200mm up the other jamb. Remove the remaining release film. Cut the SUPER-STICK at the corners away from the frame and the overhanging SUPER- STICK can be folded over the face of the wall underlay and over the butterfly tapes at the corners.
- Cut another piece of SUPER-STICK the length of the sill. Overlay this onto the sill only. This is to ensure requirements are met for nail seal-ability.
- Cut 2 pieces of at 400mm SUPER-STICK long. The tape is to be installed 200mm down the jamb & 200mm along the underside of the lintel. The install process is the same as for the sill except the two remaining 200 x 75mm butterfly pieces are applied last over the top at a 45 deg angle across the corner of the head/jamb junction overlapping by 3mm to create a seal at the corner junction.
- When joining 2 sections of tape, the overlap must be 100mm minimum.

**PROTECTO SILL SYSTEM (Option 2)**

**PRIMING**

- Ensure all surfaces are clean and dry. Spray a light film of ProtectoTak Primer to all surfaces that are to receive the Sill System tapes. Ensure substrate remains tacky before applying tape.
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**DETAIL TAPE**

- Detail Tape must be installed to all corners. AFTER PRIMING
- Cut 4 lengths of Detail Tape @ 250mm long.
- Remove the backing paper and fold the length in half with the exposed membrane to the outside.
- Position into the corner and smooth the first half of the tape onto the jamb. Keep the tape flush with the inside edge of the framing.
- Fold the remaining 125mm of tape across the lintel or sill and press firmly into place, particularly into the corner junction.
- Pinch the corner of the tape and pull away to free the corner of the release film.
- Remove the release film.
- Fan your fingers across the surface of the tape and using your thumb take hold of each direction of tape.
- Gently pull the tape forward and around onto the face of the opening.
- Smooth the tape firmly into place to enhance adhesion. Do not overstretch the tape. The corner will form as the tape is folded onto the face of opening. This process is repeated for all corners of the opening.

**HEAD FLASHING**

For the taping of head flashings use Protecto Wrap Super-Stick 75mm.

**REPAIRS**

Should air become trapped under the tapes at any stage of installation, smooth the trapped air to the outside of the tape.

If minor damage occurs then another piece of tape can be used for repair as long as it extends at least 100mm beyond the damaged area. If the damage is more than minor then the installed tape must be replaced.

**WARRANTY**

All products used in the Marshall Weatherization System are warranted to be free of defect in manufacture for a period of 15 years. This warranty is limited to replacement of the products only. Marshall Innovations (the distributor) is not liable for incorrect installation or any accidental or willful damage to the product.

**SAFETY PRECAUTIONS**

The materials must be kept away from direct exposure to heat and flames. Extra precautions must be taken when using the ProtectoTak Primer/Adhesive in areas where there is insufficient ventilation. Do not breathe the fumes and avoid skin contact.

## SHELF LIFE

The products have a recommended shelf life of 2 years from date of manufacture.

## STORAGE

Store all materials under cover, in clean dry conditions and away from direct exposure to sunlight. Do not remove the tapes from the carton until ready to use and always replace in the carton for storage.

## NOTE:

Plasticizer Migration may occur with the Protecto Sill System where a sealant is used over it. To avoid the issue of Plasticizer Migration please isolate the tape from sealant by using Danco 830 or SOUDAL's Gator Foil.

The NZBC code dictates that a sealant conforming to ISO 11600 Group F Class 25LM is to be used as the window Joint sealant. Sealants that conform to the ISO standard are NOT compatible with bitumen containing sill wraps and degradation of the sealant may occur. Even sill wraps that have a polyethylene protective film are considered as incompatible as long-term isolation of the materials is not guaranteed.

***Consideration must be taken to ensure compatibility of all building elements. Particular attention required in regards to window flashing tapes. Consider substrates the tape is bonding onto and sealants and air seals that are formed onto the tapes surface.***

- Not to be used where it is exposed to prolonged direct, indirect or reflected UV such as under unlined canopies, carports, soffits & lean to designs. Warranties are void for these applications.