



Marshall
Waterproofing
Professional Solutions

SPECIFICATION
FOR
PROTECTO WRAP
PROTECTO WALL

BRANZ Appraisal Certificate # 517 (2006)

www.mwnz.com



PROTECTO WALL SPECIFICATION

PRODUCT DESCRIPTION

Protecto Wall is a self adhering sheet waterproofing membrane system designed to prevent water vapour penetrating through basement retaining walls. Protecto Wall consists of a tough fabric reinforcement laminated between two layers of aggressive adhesive membrane. Protecto Wall is tacky on both sides of the membrane providing adhesion to the substrate and an adhesive face to hold the protection board in place. Protecto Wall is used in conjunction with Protecto Wrap Detail Tape, JS160 H Mastic and Protecto Wrap Primer. It will adhere to concrete, timber, steel, polystyrene and fibre cement sheeting to provide a durable water vapour barrier.

The Protecto Wall System is made up of the following products:

- **Protecto Wall** sheet membrane is 1.5mm thick and available in 750mm and 900mm wide by 15 metre long rolls. Sheets are overlapped by 50mm creating a membrane to membrane cohesive bond which is impenetrable to water.
- **#100 Primer** is a solvent based primer for use on all substrates except polystyrene before the installation of Protecto Wall. #100 Primer is available in 4 litre and 20 litre pails.
- **Protecto Wrap Detail Tape** is used to detail all internal and external corners and any pipes or protrusions through the wall or floor before the installation of Protecto Wall. It is also used at control joints. The Detail Tape is 1mm thick and available in 150mm wide by 15 metre long rolls.
- **JS160 H Mastic** is a semi liquid form of the membrane and is used at all terminations and joints in the membrane. It is also used in conjunction with Detail Tape (JS500) to patch mechanical fastenings. JS160 H Mastic is available in 310 ml tubes and 4 litre tins.

- **# 6000 Primer** is a waterbased primer for use on polystyrene. # 6000 primer is available in 4 litre bottles.

PROTECTION BOARD

PRO-DRAIN 8 is the recommended protection for Protecto Wall. Pro-Drain 8 is a dimpled sheet product developed specifically for below ground waterproofing protection. Pro-Drain 8 keeps water from reaching the wall surface and creates a neutral pressure zone between the foundation wall and subsoil. See Marshall Waterproofing Pro-Drain 8 specifications for full details.

FEATURES AND BENEFITS

- Installation by Protecto Wrap certified installers.
- Branz Appraised damp proof membrane system appraisal # 517 (2006).
- 50 year durability warranty.
- Clean, tidy and efficient installation.
- Sheet membrane system for optimum waterproofing security.
- Even thickness and coverage across wall surface.

STORAGE

Store all materials in a dry place at temperatures between 10°C and 32°C. Do not store in direct sunlight. Do not remove the membranes from their cartons until ready to use and always replace the membranes in their cartons for storage.

SAFETY PRECAUTIONS

Extra precautions must be taken when using #100 primer and JS160H mastic in areas where there is insufficient ventilation. Do not breathe fumes. Avoid contact with skin, wear eye /face protection.

Additional information on Protecto Wall is available in the Material Safety Data Sheets available on www.mwnz.com.

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SURFACE PREPARATION

All surfaces to receive the membrane shall be smooth, clean and free from any defects or irregularities that may affect adhesion or damage the membrane.

- **Concrete block and brick walls** should not have struck joints - these must be flush and all mortar splashes must be cleaned off the wall and footing to ensure a smooth surface. Allow 7 days curing before applying membrane. The relative humidity of the concrete must be 75% or less. Allow concrete to dry completely following precipitation.
- **Tilt slabs and preformed concrete panels** should be formed using a non transferable release agent. Concrete curing compounds must be resin based containing no oil, wax or pigment.
- **Metal surfaces** are to be clean and free of paint, oil, coatings, rust or any other contaminants. Wire brush and wipe area down with solvent wipes to ensure a clean surface.
- **Timber surfaces** shall be smooth and free of any defects and it is recommended to use H3 treated plywood. Plywood substrates must have a moisture content less than 14% before installation of the membrane.
- **Polystyrene surfaces** must be clean, dry and free of any irregularities or loose material. Block fill must be completed before Protecto Wall installation. Only use Water Based #6000 primer on polystyrene.

CONTROL/EXPANSION JOINTS

These joints shall have a closed cell PF backer rod pressed into the joint and sealed with a neutral cure sealant. Once sealant is dry, prime a minimum of 500mm either side of the joint and apply Protecto Wrap Detail Tape evenly down the length of the control - expansion joint. Leave the release film on the installed Detail Tape as this will act as a slip layer. Starting at the top of the wall centre a length of Protecto Wall over the control/expansion joint and press firmly onto the substrate. Use a broom or roller to press membrane onto the surface to maximise adhesion.

PRIMING

Prime the area to receive membrane with the selected Protecto Wrap primer. The primers have a coverage rate of approximately 5 square metres per litre. Leave the primers to flash off or cure for approx 15-20 minutes before installing the membranes.

#6000 Primer is a water based primer. Shake the bottle well before using. Clean up with water.

#100 Primer is a solvent based primer. Handle with care. Clean up with mineral turpentine.

The primers can be applied with either a brush or roller.

- Ensure the area you are priming is clean and free of all dust.
- Do not install the membranes over wet primer. The primer should not pull away from the substrate when touched.
- Only prime as much area as can be covered in 3 hours. After 3 hours, the area must be re-primed.
- Wear all appropriate safety equipment.

DETAILING

After priming and before installing the Protecto Wall membrane, all protrusions, corners and wall-to-footing junctions must be detailed with Protecto Wrap Detail Tape. Protecto Wrap Detail Tape is a highly conformable membrane which can be formed and stretched into any shape but also has an incredible ability to bond to itself.

When joining Detail Tape allow for a 100mm overlap. Do not remove the protective plastic film from the face of the detail tape until you are ready to lay the membrane.

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PROTECTO WALL INSTALLATION

It is recommended that the membrane waterproofing be applied 300mm higher than the intended finished ground level. The exposed membrane must be protected from sunlight and UV radiation.

- Mark the waterproofing height with a chalk line.
- Select a starting point for the membrane installation and mark a vertical line.
- Prime surfaces and allow to cure.
- Apply Protecto Wrap Detail Tape as required.
- Measure and cut the Protecto Wall membrane.

Start the installation from the top of the wall. In some situations the membrane can be installed horizontally. Care must be taken to ensure the joint is lapped with the upper sheet over the lower sheet.

- Peel 150mm of backing paper from the start of the sheet, align with the marks and smooth firmly onto the wall.
- Continue to remove the backing paper while smoothing the Protecto Wall firmly onto the wall.

Remember to remove the plastic film from the Detail Tape as you install the membrane. (Leave the Detail Tape release film on over control joints). Install the Protecto Wall down the wall and onto the footing. The waterproofing should finish at least 200mm below the FFL and join onto the DPM from under the footing or floor.

- Position the next length of membrane at the top of the wall allowing a 50mm over lap onto the already installed membrane. Install the waterproofing membrane down the wall as before.
- Lift the overlapping edge of the membrane and peel off the perforated film on the edge of the previously installed sheet. Smooth the membrane overlap back into place and roll the lapped joint firmly using a hard rubber roller.

Roll entire the wall with a hard rubber roller to ensure maximum contact of the membrane to the wall surface. Pay particular attention to the lap joints.

- Peel off the protective film and apply a bead of JS160H mastic along the top edge of the membrane and to the edge of all lap joints. Trowel smooth into the membrane edge.
- Fold the floor/footing DPM up approx. 500mm on to the Protecto Wall. Use Protecto Wrap detail tape and tak primer to seal the slab/footing DPM onto the Protecto Wall.

SHEET JOINTS

Care must be taken to ensure sheet edge overlaps are a minimum of 50mm. Sheet end laps must be a minimum of 100mm.

MECHANICAL FIXING

In very cold conditions and when the wall height exceeds 2.4m Protecto Wall should be mechanically fastened along the top edge of the membrane at 300mm spacings. Apply a bead of JS 160H Mastic around all fasteners and cover with detail tape. Roll patch to maximise adhesion.

REPAIRS

Should air become trapped behind the membrane at any stage of the installation, puncture and press firmly to expel the air. Place a bead of JS 160H liquid membrane over the punctured area and trowel smooth. Cover with Detail Tape and roll firmly.

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WARRANTY

Provided that Protecto Wall is continually protected from sunlight and UV radiation it is warranted to be free of defects in manufacture for a period of 50 years. This warranty is limited to replacement of the Protecto Wall material.

NOTES

Membrane protection, wall drainage and backfilling must be completed as soon as possible after the waterproofing has been completed.

THE MEMBRANE MUST BE PROTECTED AGAINST DAMAGE BY THE PLACEMENT OF PRO-DRAIN 8 OR SIMILAR PROTECTION BOARD BETWEEN THE MEMBRANE AND THE GRANULAR BACKFILL.

Backfilling, drainage and backfill capping must be in accordance with NZBC acceptable solutions E2/AS1, Section 12.

Requirements include:

Subsoil drainage covered with a geotextile filter fabric laid with fall at the bottom of the wall below FFL.

Subsoil drainage must discharge to a drainage outlet and have provision made for cleaning.

Backfill of free draining material with a backfill cap of impervious clay.

Backfill to slope away from the wall at a minimum fall of 1:30.

MAINTENANCE

Regular inspections are required to ensure the membrane top edge seal and protection, backfilling cap and wall drainage are all functioning correctly. The slope of the backfill cap must be maintained at all times.

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