

0411P DUROTECH WATERPROOFING – EXTERNAL AND TANKING**1 GENERAL****1.1 RESPONSIBILITIES****General**

Requirement: Provide DUROTECH waterproofing membrane systems for roofing, podiums, decks, balconies, concrete slabs over below ground spaces, retaining walls, tunnels, landscape and planter boxes, and tanking, as documented.

Performance

Requirements: Conform to the following:

- Graded to falls to dispose of stormwater without ponding above the depth of lapped seams.
- Able to accommodate anticipated building movements.
- Able to accommodate its own shrinkage over the warranty life of the roofing system.
- Able to resist water under hydrostatic pressure.

1.2 COMPANY CONTACTS**DUROTECH technical contact**

Website: www.durotechindustries.com.au/contact/

1.3 CROSS REFERENCES**General**

Requirement: Conform to the following:

- 0171 General requirements.

1.4 STANDARDS**External waterproofing**

Membrane materials: To AS 4654.1.

Membrane design and installation: To AS 4654.2.

Stormwater drainage

Standard: To AS/NZS 3500.3.

1.5 MANUFACTURERS DOCUMENTS**Technical manuals**

Website: www.durotechindustries.com.au/technical-literature/

1.6 INTERPRETATION**Definitions**

General: For the purposes of this worksection the definitions given in AS 4654.1 and AS 4654.2 and the following apply:

- Bitumen: A viscous material from the distillation of crude oil comprising complex hydrocarbons, which is soluble in carbon disulphide, softens when it is heated, is waterproof and has good powers of adhesion. It is produced as a refined by-product of oil.
 - . APP Bitumen: Bitumen modified with Atactic (meaning non-crystalline or amorphous) polypropylene wax to form a plastomeric sheet. The membrane is reinforced with fibreglass or non-woven polyester (NWP).
 - . SBS bitumen: Bitumen modified with Styrene Butadiene Styrene, a thermoplastic rubber that undergoes a phase inversion at elevated temperature and converts to an elastomeric material. The membrane is reinforced with fibreglass or non-woven polyester (NWP).
- Bond breaker: A system preventing a membrane bonding to the substrate, bedding or lining.
- Double detail joint: A joint formed by turning up and bonding the horizontal membrane to a vertical substrate and adding an overflashing of membrane material bonded to the vertical substrate and folded over and bonded to the horizontal membrane. In certain situations the double detail can be

achieved by bonding an angle profile of membrane material to the junction prior to laying the membrane.

- Liquid applied: A water-based formulation which cures to form an elastomeric membrane.
- Polyurethane: Water or solvent based formulations which moisture cure to form an elastic rubber membrane.
- PVC membrane: Flexible plastic sheet membrane (vinyl).
- Slip sheet: A sheet used to isolate the membrane system from the supporting substrate or from the topping or mortar bedding. The most common material is polyethylene.
- Substrate: The surface to which a material or product is applied.
- Waterproofing systems: Combinations of membranes, flashings, drainage and accessories which form waterproof barriers and which may be:
 - . Loose-laid.
 - . Bonded to substrates.

1.7 SUBMISSIONS

Products and materials

Manufacturer's documentation: Submit copies of the following data:

- Product technical data sheets.
- Safety data sheets (SDS).
- Preventative maintenance procedures.
- Instructions and procedures for the repair of the membrane.
- Type test certificates verifying compliance with AS 4654.1 Section 2, Tables 2.1 to 2.3.

Prototypes

General: Apply waterproofing to 10 m² of substrate to demonstrate surface preparation, crack and joint treatment, corner treatment, and execution quality. Install final surface finish to demonstrate aesthetic affects, physical properties, and quality of materials and execution as applicable.

Records

Placing records: Submit a photographic record of the application of membranes and labelled with the following information:

- Date.
- Portion of work.
- Substrate preparation.
- Weather during application and curing.
- Protection provided from traffic and weather.

Liquid membrane applications:

- Wet film thickness: Submit details of wet film thickness recorded once every 10 m² and compared to the manufacturers requirements.
- Application rate: On completion of every 100 m² of each coat compare the amount of membrane used with the manufacturers application rate and submit details of the result.

Samples

Requirement: Submit 300 x 300 mm samples of each type of membrane including the finish of the visible surface.

Shop drawings

Requirement: Submit shop drawings showing the following:

- Junctions with vertical surfaces.
- Drainage details.
- Control joints.
- Flashings.
- Penetrations.
- Corners.
- Terminations and connections.

- Membrane layers.
- Insulation and protection.

Subcontractors

Requirement: Submit names and contact details of proposed installers.

Evidence of experience: [complete/delete]

Warranties

Requirement: Submit warranties to **COMPLETION, Warranties.**

1.8 INSPECTION**Notice**

Inspection: Give notice so that inspection may be made of following:

- Substrate preparation completed.
- Secondary layers preparation completed.
- Before membranes are covered up or concealed.
- Underflashings complete before installation of overflashings.
- After flood testing.

2 PRODUCTS

2.1 GENERAL**Product substitution**

Other products: Conform to PRODUCTS, **GENERAL, Substitutions** in *0171 General requirements.*

Storage and handling

Store and handle to Durotech's recommendations and as follows:

- Protect materials from damage.

Marking

Identification: Marked to show the following:

- Manufacturer's identification.
- Product brand name.
- Product type.
- Quantity.
- Product reference code and batch number.
- Date of manufacture.

2.2 DUROTECH LIQUID MEMBRANES**Duro Mastic AC Clear**

Description: High performance, water-based, rubberised bitumen, liquid waterproofing membrane.

Duro Mastic BLW

Description: Liquid applied, latex modified bituminous elastomeric waterproofing membrane.

Duroguard Crystalline WPM

Description: Surface applied capillary waterproofing system consisting of cement, silica aggregates and moisture activated chemicals.

Durotech ARW

Description: Single component water-based primer.

Duro Silane

Description: Siloxane modified acrylic topcoat.

Duroarmour

Description: High-build siloxane modified acrylic waterproofing membrane.

Duromix Hibuild WBE

Description: High-build siloxane modified acrylic waterproofing membrane.

Duroproof PU Antiroot

Description: Single component liquid, polyurethane elastomeric membrane.

Duro Mastic DurorooF

Description: Single component liquid, double crosslinked copolymer membrane.

Duroproof PPM (SL), (STD)

Description: Single component liquid, polyurea/polyurethane hybrid membrane.

Durocoat 90A

Description: Two component fast curing aliphatic coating.

2.3 DUROTECH SELF-ADHESIVE MEMBRANES**DuroTorch Superstick**

Description: Single layer self-adhesive polymeric membrane.

Duro Stick SP

Description: Single layer self-adhesive bituminous elastomeric sheet membrane.

2.4 DUROTECH BONDED MEMBRANES**DuroTorch Green Roof**

Description: Bituminous plastomeric torch-on waterproofing sheet membrane.

DuroTorch Vent Base

Description: Base sheet in a bonded built-up roofing system.

DuroTorch 3MM

Description: Bituminous plastomeric torch-on waterproofing sheet membrane with upper face of coloured slate chips.

DuroTorch 4 mm Mineral

Description: Bituminous plastomeric torch-on waterproofing sheet membrane.

DuroTorch Car Park

Description: Bituminous plastomeric torch-on waterproofing sheet membrane.

DuroTorch Fleece Back

Description: Bituminous reinforced plastomeric sheet membrane, with non-woven polyester fleece on the underside.

Typical application: An adhered membrane composed of a distilled bitumen modified compound for use as the base layer for multiple layer membrane systems.

2.5 DUROTECH CEMENTITIOUS MEMBRANES**Durobuild HB**

Description: Single component polymer cementitious mortar.

Duroflex Plug

Description: Rapid setting cement compound.

Duroflex Basement

Description: Single component polymer cementitious slurry coat.

Duroflex Tank

Description: Two component polymer modified cementitious coating.

Duromastic ACS-2

Description: Flexible two-part high solids liquid/cement copolymer fibre reinforced waterproofing membrane.

Duromastic ACS-3

Description: Two-part high solids liquid/cement copolymer fibre reinforced waterproofing membrane.

Durobentonite 100

Description: A multi-layer sheet membrane system of a self-sealing, expandable bentonite layer laminated on high density polyethylene (HPDE).

2.6 DUROTECH PRIMERS AND SEALERS**Duro Sil-Prime**

Description: Siloxane modified acrylic primer.

Durotech Bitumen Primer

Description: Solvent based bitumen primer.

Durotech ARW

Description: Single component water-based primer.

Duroprime SSP

Description: Solvent free non-porous surface primer.

Duroseal 25LM

Description: Single component polyurethane-based sealant.

Duroseal FC

Description: Single component moisture curing polyurethane sealant.

Duroprime PU Primer

Description: A moisture curing, single component, liquid polyurethane penetrating waterproofing primer.

Durotile Flex

Description: Rubber modified off-white cement-based tile adhesive.

2.7 ACCESSORIES**Internal roof outlets**

General: Proprietary funnel shaped sump cast into the roof slab, set flush with membrane, with a flat removable grating and provision for sealing the membrane into the base of the outlet.

Material: [complete/delete]

Grating: [complete/delete]

Flashing

Pressure seal flashing: [complete/delete]

Fixing: [complete/delete]

Sealant: [complete/delete]

Control joint covers

Proprietary item: [complete/delete]

Corners, crossovers, tees and bends: Factory mitred, welded and provided with 500 mm legs.

End closures: Factory folded and sealed to match joint cover profile.

Fixing hobs: [complete/delete]

2.8 THERMAL INSULATION**Insulation boards**

Description: [complete/delete]

2.9 PROTECTION**Protection board**

Description: Lightweight polypropylene, impact protection sheet for membranes.

2.10 SLIP SHEETS**Sheet material**

Description: [complete/delete]

2.11 DRAINAGE CELL**Durodrain**

Description: Heavy duty polypropylene dimpled cell with non-woven geotextile fabric.

Cell panel protection: [complete/delete]

3 EXECUTION

3.1 PREPARATION**Substrates**

General: Prepare substrates as follows:

- Fill all cracks in substrates wider than 1.5 mm with a filler compatible with the membrane system.
- Fill voids and hollows in concrete substrates with a concrete mix not stronger than the substrate.

- Remove projections.
- Remove deleterious and loose material.
- Remove all traces of a concrete curing compound if used.
- Leave the surface free of contaminants, clean and dust free.

Concrete substrates: Cure for more than 28 days.

Moisture content

Requirement: Verify that the moisture content of the substrate is compatible with the water vapour transmission rate of the membrane system by testing to AS 1884 Appendix A.

Falls

Requirement: Verify that falls in substrates are greater than 1:80.

Joints and fillets

Internal corners: [complete/delete]

Fillet material: [complete/delete]

External corners: Round or arris edges.

Control joints: Prepare all substrate joints to suit the membrane system.

Priming

Compatibility: If required, prime the substrates with compatible primers for adhesion of the membrane system.

3.2 APPLICATION

Protection during installation

Damage: Protect membrane from damage during installation and for the period after installation until the membrane achieves its service characteristics that resist damage.

Drains

General: Prevent moisture from tracking under the membranes at drainage locations.

Drains and cages: Provide removable grates or cages to prevent blockage from debris. If the finished surface is above the level of the membrane, provide a slotted extension piece to bring the grate up to the level of the finished surface.

Overflows: Apply a bond breaker to the perimeter of the overflow outlet at its junction with the surface to which the membrane will be fixed. Turn the membranes into the overflow to prevent moisture from tracking behind the membrane.

Sheet membrane joints

Self-adhesive membranes:

- Longitudinal laps: 50 to 60 mm.
- Transverse laps: 70 to 80 mm.

Pre-applied sheet membranes:

- Selvege: 75 mm.
- Over-seal: 75 mm.

Bituminous sheet membranes:

- Side laps: 100 mm.
- End laps: 150 mm.

Curing of liquid applied systems

General: To the manufacturers' instructions.

Control of movement

General: Provide control joints located over control joints in the substructure.

Fillets and bond breakers: Size to allow the membrane to accommodate movement.

Backing rod: [complete/delete]

Joint Sealant: [complete/delete]

Joint backing gutter: [complete/delete]

Control joint covers: Install after fixing hobs and membranes.

Bonded membranes: Carry control joints in the substrate through to and into the surface finish.

Membrane terminations

Membrane upturns: Provide upturns above the maximum water level expected from the exposure conditions of rainfall intensity and wind.

- Height: To AS 4654.2 Appendix A, Table A1.
- Anchoring: Secure sheet membranes along the top edge.
- Edge protection: Protect edges of the membrane.

Vertical upward terminations: [complete/delete]

Vertical downward terminations: [complete/delete]

Horizontal terminations: Do not provide. Use vertical terminations.

Membrane vertical penetrations

Pipes, balustrades, ducts, and vents: Provide separate sleeves for all pipes, balustrades, ducts and vents and fix to the substrate.

Membrane horizontal penetrations

PVC-U conduits and pipes: To seal the membrane without burning the PVC-U, protect PVC-U conduits and pipes with Index Autotene 3 mm. Do not use high density polyethylene (HDPE), polypropylene (PP) pipes or flexible PVC conduit.

Penetrations: Install bandages, flanges and sealants for all vertical penetrations to Durotech's recommendation.

Membrane at balcony doors and windows

Requirement: Install membrane before the fixing of door or window frames.

Membrane upturn:

- Vertical height above external finished floor level: [complete/delete]

Hobless and flush thresholds: Install membrane before the fixing of door or window frames with a continuous grated drain abutting the external face of the door or window sill.

Membrane around skylights and hatches

Requirement: Install membranes to upstands before the installation of the skylight or hatch.

Upstand height above roof surface: [complete/delete]

Membrane at parapets

Requirement: Terminate membrane upstands under parapet flashing or capping giving 75 mm overlap. Do not top fix parapet cappings. Seal heads of fasteners against capping.

Membrane at gutters

Requirement: Terminate membrane over a corrosion resistant metal angle fixed to the gutter support substrate with the vertical leg of the angle turned down into the gutter at least 35 mm.

Membrane at post supports

Post supports fixed before/after membrane: [complete/delete]

Membrane to planter boxes

Membrane: Extend root-resistant membrane at least 100 mm vertically above the soil fill level and secure.

Drainage: Grade the base of the planter to adequately sized drainage outlets and terminate the membrane in the outlets.

Drainage riser: Install a riser with drainage slots that extend from the membrane level to the top of the drainage cell. Extend the riser above the soil fill level and finish with a screw cap to provide access for drain clearing.

Protection board: Provide protection board to the full extent of the membrane including areas between soil level and the underside of flashings and cappings.

Drainage cell: Provide geo-filter fabric wrapped drainage cell to the base of the planter and turn geo-filter fabric up drainage riser at least 100 mm above drainage slots.

Cappings and flashings: Provide capping to the tops of planter walls to protect the membrane. Extend the capping to overlap the top of the protection board on the inside face of the planter wall. Where planter walls abut other walls, provide a flashing over the top of the membrane.

Membrane to below ground structures

Membrane: Externally apply membrane to all walls and return to horizontal surfaces to prevent water tracking around structure at joints and corners.

Protection board: Provide protection board to the full extent of the membrane.

Drainage cell: Provide geo-filter fabric wrapped drainage cell to vertical surfaces of the structure.

Reinforcement: Provide reinforcement to the membrane at junctions, corners and over joints to the manufacturer's recommendations.

Overlaying finishes on membranes

Compatibility: If a membrane is to be overlaid with another system such as tiles, pavers, ballast, insulation or soil, provide an overlaying system that is compatible with and will not cause damage to the membrane.

Bonded or partially bonded systems: If the topping or bedding mortar is to be bonded to the membrane, provide sufficient control joints in the topping or bedding mortar to reduce the movement over the membrane.

Slip sheet: If the topping or bedding mortar is structurally sufficient not to require bonding to the substrate, lay a double slip sheet over the membrane to separate it from the topping or bedding mortar.

Paint coatings: If maintenance pathways are indicated by a paving paint, use a paving paint which is compatible with the membrane.

Membrane protection boards: [complete/delete]

Installation: [complete/delete]

Location: [complete/delete]

Fixing: [complete/delete]

3.3 TESTING

Flood test

Application: Perform a flood test before the installation of surface finishes.

Moisture content measurement method: Conform to AS 1884 Appendix A

Set-up:

- Measure the wall/floor junction of adjacent spaces and of the slab soffit below for dryness.
- Record the result for each area.
- Dam the access openings and seal drainage outlets to allow 50 mm water level but no higher than 25 mm below the weir level of the perimeter flashings.
- Provide temporary overflows of the same capacity as the roof outlets to maintain the flood level.
- Fill space with clean water and leave overnight.

Evaluation:

- Make a visual inspection after a minimum period of 2 hours, of the wall/floor junction of adjacent spaces and of the slab soffit below for obvious water or moisture.
- Test the same areas for dryness using a moisture meter, and compare the results to the measurements taken before flooding.

Conformance:

- Evidence of water from the visual test: Failure.
- No visual evidence of water: Proceed with the moisture meter test.
- Test results indicating an increase in moisture before and after flooding: Failure.

Records: Submit records of all flood tests.

3.4 COMPLETION

Protection

General: Keep traffic off membrane surfaces after laying until bonding has set, 24 hours or to Durotech's recommendation, whichever period is the longer.

Reinstatement: Repair or replace faulty or damaged work. If the work cannot be repaired satisfactorily, replace the whole area affected.

Warranties

Waterproofing: Cover materials and workmanship in the terms of the warranty in the form of interlocking warranties from the supplier and the applicator.

- Form: Against failure of materials and execution under normal environment and use conditions.

Period: [complete/delete]

4 SELECTIONS**4.1 EXTERNAL WATERPROOFING****Requirements schedule**

Property	A	B	C
Traffic			
Nature of traffic			
Slip resistance classification			
Overlying finish			
Root and bioresistance			

4.2 ROOF/PODIUM/DECK WATERPROOFING**Maintenance traffic areas schedule**

Property	1A	1B	1C	1D	1E
Proprietary system	Durotech	Durotech	Durotech	Durotech	Durotech
Material type	Two-layer, torch on mineral finish sheet membrane system	Two-layer, torch on mineral finish sheet membrane system	Solvent free Polyurethane liquid applied membrane	Water-based, Polymer/Cementitious, liquid applied membrane	Low VOC solvent liquid applied membrane
Primer: Porous substrates	Durotech Bitumen Primer	Durotech Bitumen Primer	Durotech ARW	Durotech ARW	Duroprime PU
Primer: Non-porous substrates	Durotech Bitumen Primer	Durotech Bitumen Primer	Duroprime SSP	Duroprime SSP	Duroprime PU
Joint bond breaker	Sand/cement fillet	Sand/cement fillet	Durolasto Tape	Durolasto Tape	Duroseal 25LM
Base membrane	DuroTorch 3MM	DuroTorch 3MM	-	-	Duroproof PPM
Top membrane	DuroTorch 4 mm Mineral	DuroTorch 4 mm Mineral	DuroMastic P15	Duromastic ACS-3	Duroproof ATC
UV wear coat	-	-	DuroMastic AC	Duromastic DurorooF	Durocoat 90A
Surface protection finish			Duromastic AC non slip*	Duromastic AC non slip*	

Pedestrian traffic areas – tiled /paved schedule

Property	2A	2B	2C	2D	2E
Proprietary system	Durotech	Durotech	Durotech	Durotech	Durotech
Material type	Two-layer, torch-on sheet membrane with screed, tile/paver over	Two-layer, torch-on sheet membrane with screed, tile/paver over	Solvent free polyurethane, liquid applied membrane with screed, tile/paver over	Water-based, polymer/cementitious, liquid applied membrane with screed, tile/paver over	Low VOC solvent liquid applied membrane

Property	2A	2B	2C	2D	2E
Screed	Concrete screed over	Concrete screed over	Concrete screed over	Concrete screed over	Concrete screed over
Primer: Porous substrates	Durotech Bitumen Primer	Durotech Bitumen Primer	Duromastic ARW	Duromastic ARW	Duroprime PU Primer
Primer: Non-porous substrates	Durotech Bitumen Primer	Durotech Bitumen Primer	Duroprime SSP	Duroprime SSP	Duroprime PU Primer
Joint bond breaker	Sand/cement fillet	Sand/cement fillet	Durolasto Tape	Durolasto Tape	Duroseal 25LM
Base membrane	Durotorch 3MM	Durotorch 3MM	-	-	
Top membrane	DuroTorch 4 mm Mineral	Durotorch 3MM	DuroMastic P15	Duromastic ACS-3	Duroproof PPM

Carpark/vehicle traffic areas schedule

Property	3A	3B	3C	3D	3E
Proprietary system	Durotech	Durotech	Durotech	Durotech	Durotech
Material type	Two-layer, torch-on sheet membrane	Single layer, torch-on sheet membrane	Single layer, self-adhesive, sheet membrane	Solvent free polyurethane, liquid applied membrane	Low VOC solvent based liquid applied membrane
Overlay	Concrete topping slab	Concrete topping slab or asphalt overlay	Concrete topping slab	Concrete topping slab	Concrete topping slab
Primer: Porous substrates	Durotech Bitumen Primer	Durotech Bitumen Primer	Duroprime PU Primer	Duromastic ARW	Duroprime PU Primer
Primer: Non-porous substrates	Durotech Bitumen Primer	Durotech Bitumen Primer	Duroprime PU Primer	DuroPrime SSP	Duroprime PU Primer
Joint bond breaker	Sand/cement fillet	Sand/cement fillet	Sand/cement fillet	Durolasto Tape	Durseal 25LM
Base membrane	Durotorch 3MM	-	-	-	
Top membrane	DuroTorch 4 mm Mineral	DuroTorch Car Park	DuroTorch Superstick	Duromastic P15	Duroproof PPM

4.3 BALCONY AREAS

Balcony/terrace areas – tiled/paved schedule

Property	5A	5B	5C	5D	5E
Proprietary system	Durotech	Durotech	Durotech	Durotech	Durotech
Material type	Two layer torch-on, sheet membrane system with screed, tile/paver over	Two layer torch-on, sheet membrane system with screed, tile/paver over	Solvent free polyurethane liquid applied membrane with screed, tile/paver over	Water-based, polymer/cementitious, two part, liquid applied membrane with screed, tile/paver over	Low VOC solvent-based liquid applied membrane
Screed	Screed layer	Screed layer	Screed layer	Screed layer	Screed layer

Property	5A	5B	5C	5D	5E
	over	over	over	over	over
Primer: Porous substrates	Durotech Bitumen Primer	Durotech Bitumen Primer	Duromastic ARW	Duromastic ARW	Duroprime PU primer
Primer: Non-porous substrates	Durotech Bitumen Primer	Durotech Bitumen Primer	DuroPrime SSP Primer Non-Porous	DuroPrime SSP	Duroprime PU Primer
Joint bond breaker	Sand/cement fillet	Sand/cement fillet	Durolasto Tape	Durolasto Tape	Duroseal 25LM
Base membrane	Durotorch 3MM	Durotorch 3MM	-	-	
Top membrane	DuroTorch 4 mm Mineral	Durotorch 3MM	DuroMastic P15	Duromastic ACS-3	Duroproof PPM

4.4 LANDSCAPED GARDEN

Landscaped garden areas schedule

Property	6A	6B	6C
Proprietary system	Durotech	Durotech	Durotech
Material type	Two layer torch-on, root resistant, sheet membrane system with drainage sheet	Two layer torch-on, root resistant, sheet membrane system with drainage sheet	Low VOC solvent based root resistant urethane liquid applied membrane
Primer	Durotech Bitumen Primer	Durotech Bitumen Primer	Duroprime PU Primer
Base membrane	Durotorch 3 mm	Durotorch 3 mm	Duroproof PU ANTI ROOT
Top membrane	Durotorch Green roof	Durotorch Green roof	Duroproof PU ANTI ROOT
Drainage sheet layer	Durotech DuroDrain	Durotech DuroDrain	Durotech DuroDrain

Planter box gardens schedule

Property	7A	7B	7C
Proprietary system	Durotech	Durotech	Durotech
Material type	Two layer torch-on, root resistant, sheet membrane system with drainage sheet	Two layer torch-on, root resistant, sheet membrane system with drainage sheet	Polyurethane modified , liquid applied membrane, containing root inhibitors, with drainage sheet
Primer: Porous substrates	Durotech Bitumen Primer	Durotech Bitumen Primer	Duroprime PU Primer
Primer: Non-porous substrates	Durotech Bitumen Primer	Durotech Bitumen Primer	Duromastic Hibuild epoxy primer
Joint bond breaker	Sand/cement fillet	Sand/cement fillet	Duroseal 25LM
Base membrane	Durotorch 3MM	Durotorch 3MM	-
Top membrane	Durotorch Green roof	Durotorch Green roof	DuroProof PU ANTI-ROOT with Duroseal 25LM joint sealant
Drainage sheet	Durotech DuroDrain	Durotech DuroDrain	Durotech DuroDrain
Protection board	Durotech Protection Board	Durotech Protection Board	Durotech Protection Board

4.5 BELOW GROUND BASEMENT WATERPROOFING/TANKING

Below ground basement waterproofing and drainage/tanking schedule

Property	8A	8B	8C	8D	8E
Proprietary system	Durotech	Durotech	Durotech	Durotech	Durotech
Material type	Single layer, pre-applied, sheet waterproofing and tanking membrane system	Two layer torch-on, sheet membrane system with drainage sheet	Single layer, self-adhesive, sheet membrane with drainage sheet	Water-based, rubberised bitumen, liquid applied membrane with drainage sheet	2 part cementitious co polymer liquid applied membrane with drainage sheet
Primer: Porous substrates	-	Durotech Bitumen Primer	Durotech Bitumen Primer	Diluted Duromastic BLW	Self-priming
Primer: Non-porous substrates	-	Durotech Bitumen primer	-	DuroPrime SSP	Self-priming
Joint bond breaker	Sand/cement fillet	Sand/cement fillet	Sand/cement fillet	Durolasto Tape	Durolasto Tape
Base membrane	-	DuroTorch 3MM	-	-	-
Top membrane	Durobentonite 100	DuroTorch 3MM	DuroTorch Super Stick	Duromastic BLW	Duroflex Tank
Waterproofing	Durobentonite 100	-	-	-	-
Drainage	Durotech DuroDrain	Durotech DuroDrain	Durotech DuroDrain	Durotech DuroDrain	Durotech DuroDrain

Retaining wall waterproofing and drainage schedule

Property	9A	9B	9C	9D
Proprietary system	Durotech	Durotech	Durotech	Durotech
Material type	Two layer torch-on, sheet membrane system with drainage sheet	Single layer torch-on, sheet membrane with drainage sheet	Single layer, self-adhesive, sheet membrane with drainage sheet	Polyurethane modified, liquid applied membrane, incorporating plant root inhibitors, with drainage sheet
Primer: Porous substrates	Durotech Bitumen Primer	Durotech Bitumen Primer	Durotech Bitumen Primer	Duroprime PU primer
Primer: Non-porous substrates	Index Bitumen Primer	Index Bitumen Primer	Durotech Bitumen Primer	Duroprime PU primer
Joint bond breaker	Sand/cement fillet	Sand/cement fillet	Sand/cement fillet	Duroseal 25LM
Base membrane	DuroTorch 3MM	-	-	-
Top membrane	DuroTorch 3MM	DuroTorch 3MM	DuroTorch Peel n Stick	Duroproof PU ANTI-ROOT
Drainage	Durotech DuroDrain	Durotech DuroDrain	Durotech DuroDrain	Durotech DuroDrain

4.6 OTHER WATERPROOFING APPLICATIONS

Water storage retaining tanks/vessels schedule

Seamless wet area membranes	10A	10B

Seamless wet area membranes	10A	10B
Proprietary system	Durotech	Durotech
Material type	Flexible, dynamic crack accommodating, cement based render waterproofing barrier for new or old concrete/masonry structures, potable water approved to AS/NZS 4020	In-depth concrete capillary penetrating, crystal growth sealing, cement based waterproofing barrier for high positive/negative water pressures, potable water approved to AS/NZS 4020
Primer: Porous substrates	-	-
Primer: Non-porous substrates	-	-
Joint bond breaker	-	-
Membrane (UV Protected or Exposed)	Duroflex Tank	DuroGuard Crystalline WPM

Tunnel waterproofing and drainage/tanking schedule

Property	11A	11B	11C	11D
Proprietary system	Durotech	Durotech	Durotech	Durotech
Material type	Two layer torch-on, sheet membrane system with drainage sheet	Single layer torch-on, sheet membrane with drainage sheet	Single layer, pre-applied, sheet waterproofing and tanking membrane	Single layer, self-adhesive, sheet membrane with drainage sheet
Primer	Durotech Bitumen Primer	Durotech Bitumen Primer	-	Durotech Bitumen Primer
Base membrane	DuroTorch 3MM	-	-	-
Top membrane	DuroTorch 4 mm Mineral	DuroTorch 3MM	DuroBentonite 100	DuroTorch Super Stick
Drainage	Durotech DuroDrain	Durotech DuroDrain	Durotech DuroDrain	Durotech DuroDrain

Vented waterproofing systems for failed membranes, or heat sensitive substrates schedule

Property	12A	12B	12C
Proprietary system	Durotech	Durotech	Durotech
Material type	Multi-layer torch-on, vented, mineral finish membrane system	Two layer torch-on, vented, mineral finish, sheet membrane system	Multi-layer heat adhered/torch-on, mineral finish, sheet membrane system over failed membranes, or heat sensitive substrates
Primer	Durotech Bitumen Primer	Durotech Bitumen Primer	-
Adhesives	-	-	Contact adhesive or mechanically fixed
Preparation/Vent Sheet	Durosheets Vent Base	Durosheets Vent Base	Durosheets Fleece Back
Middle Membrane	DuroTorch 3MM	-	DuroTorch 3MM
Top Membrane	DuroTorch 4 mm Mineral	DuroTorch 4 mm Mineral	DuroTorch 4 mm Mineral