



DISTRIBUTED
BY **PROJEX**
GROUP PTY. LIMITED

PVC WATERPROOFING MEMBRANE



The Economical Solution

Complete Waterproofing System
with all accessories included.

Available to all Waterproofing Contractors

The Complete Cosmofin Waterproofing System

Cosmofin Membranes

- **COSMOFIN FG LL** Reinforced membrane, 1.5mm thick, light grey, with side edges sealed beyond the reinforcement. Generally used for loose laid applications. (Roll size: 1.65m x 20m long)
- **COSMOFIN FG LLV** Reinforced membrane with integrated fleece backing, 1.5mm thick, light grey, with side edges sealed beyond the reinforcement. Ideal for bonded applications & can also be loose laid. It can be laid directly over bitumen. (Roll size: 1.65m x 15m long)
- **COSMOFIN F** Unreinforced detailing / closer strip membrane, 1.5mm thick. (Roll Size: 1m x 20m long)



Cosmofin Ancillaries

Cosmofin ancillaries have been individually designed to ensure total compatibility and ease of application and play a vital role in achieving the total integrity of the overall Cosmofin waterproofing system.

- **COSMOFIN STEEL** 24 gge galvanised steel with membrane factory bonded to one side. Four standard profiles shapes are available in stock and specials can be made to order.
- **COSMOFIN CORNERS** Prefabricated corners aid speed of installation on site, and are used to reinforce internal and external corners with no stretching or cutting required.
- **COSMOFIN THF** Tetrahydrofuran cold welding solvent, for cold welding of overlaps & PVC pipe connections.
- **WOLFINATOR** Wolfinator is a structural grade adhesive that has been specially formulated for the bonding of Cosmofinsteel to absorbent & non-absorbent substrates including metals, ceramics, timber, glass, etc. It will also adhere to slightly damp substrates.
- **TEROTECH SPRAY** Adhesive for bonding loose laid membranes to the vertical substrates where adhesion is required- skirting tiles etc.
- **TEROKAL TK400** The recommended adhesive for strip bonding of Cosmofin LLV to most substrates where adhering is required. TK 400 can be installed over existing membranes, damp substrates and is applied using 60cm Lance Applying Gun.
- **PROJEX SHOCKMAT** Rubber matting supplied in roll form and available in 5 and 10mm thickness. Used as a protective walkway, temporary protection of finished floors etc



Revolutionary Solution for Bonding PVC Membranes

Cosmofin Strip-Bonded

This new application technique will save time and money to waterproofing contractors that need to adhere the membrane to the substrate. Cosmofin LLV waterproofing membrane can be applied using this new and innovative installation method.

Only 5 easy steps to follow:

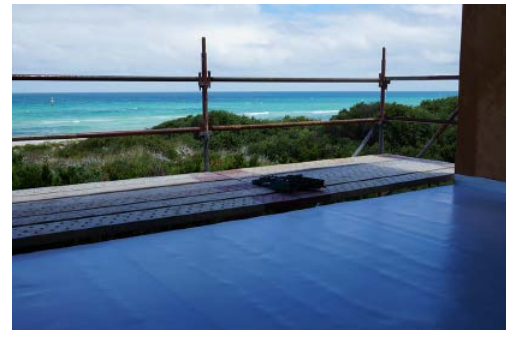
Step 1: Install Terokal 400 can onto the Witec Foam Gun

Step 2: Apply TK400 in continuous beads of 30mm diameter directly in front of each roll of Cosmofin LLV (minimum 3 per width of roll)

Step 3: Roll out the Cosmofin LLV membrane onto the Terokal adhesive to bond to the substrate.

Step 4: Use a broom or roller to ensure full adhesion to the substrate

Step 5: Clean the Witec Foam Gun with the Terotech PU Cleaner.



TK 400

Advantages at a glance

- Fast Application - Easy and cost effective
- Universal and safe to use on all substrates
- High Yield (when applying three beads per m² on one can of TK 400 covers up to 16sqms)
- Workable in cold weather (down to -5°C)



Typical Installation of Cosmofin Membranes (LL & LLV)

Bonded or Loose Laid Applications

Substrate Preparation

- All substrates to which the Cosmofin membrane is to be applied must be sound, smooth, clean and free from any residues and foreign materials.
- Oil or bitumen residues must be removed (Except when using FG LL V)
- Check the existing bond and/or compatibility before deciding to overlay failed membrane.
- While laying the membrane, keep the substrate swept clean to prevent stones or debris from lodging under the membrane.

Profile Fixing

- Cosmofin Steel profiles are supplied in 2 metre lengths. Space them 2mm apart and join with 50mm wide welded patches for the full girth of the profile. The joining process is not required for Type D2.
- Fix all profiles at 150mm centres.

Membrane Laying and Lap Welding

- Layout: Set out the rolls so that they are used most economically, and the welds are minimized
- Side Laps: Overlap each roll a minimum of 50mm and weld the full width
- End Laps: All as side laps
- Multi lap junctions-capillaries: Where these occur they are to be welded tight. Sealants should not be used.



Cosmofin Membrane Areas of Application

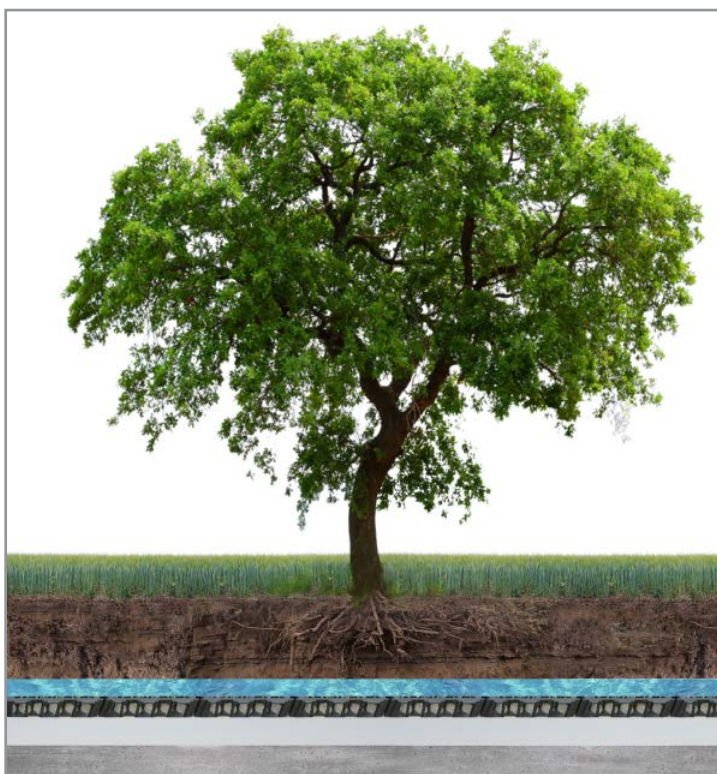


- | | |
|---|--|
| 1 Flat Roof - Exposed, Bonded Installation | 6 Landscaped Areas |
| 2 Flat Roof - Under Insulation and/or Ballast | 7 Podium Slabs - Under Tiles or Pavers |
| 3 Green Roof | 8 Water Retaining Structures - Water Features |
| 4 Planter Boxes | 9 Water Tanks |
| 5 Balconies & Terraces - Under Tiles & Pavers | 10 Below Ground - Basements, Retaining Walls, Lift Pits & Cellar |

Area of installation	Cosmofin LL	Cosmofin LLV
Flat Roof	✓	✓
Balcony	✓	✓
Terrace	✓	✓
Podium Deck	✓	✓
Retaining Wall	✓	✓
Planter Box	✓	✓
Basement	✓	✓
Lift Pit	✓	✓
Cellar	✓	✓
Expansion Joint	✓	
Water Tank	✓	

Cosmofin & Green Applications

The Cosmofin membranes exhibit excellent resistance to chemicals such as those present in fertilisers, and have been FLL tested and certified root resistant, making them ideal for use in rooftop gardens, landscaped areas, planter boxes, green walls, etc



Plantings

Growing medium
Suitable Filter Fabric (A44)

Drainage Cell

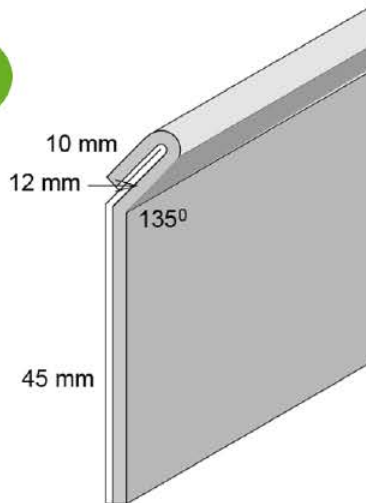
COSMOFIN SYSTEM
Loose laid or bonded

Suitable Substrates
Concrete - steel
CFC - Timber
Failed Membrane

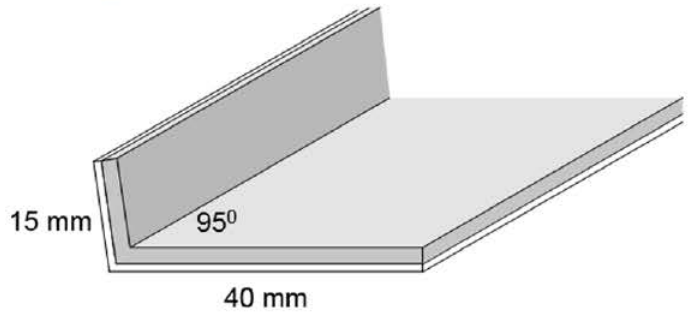
Technical Information

Cosmofin Steel Profiles

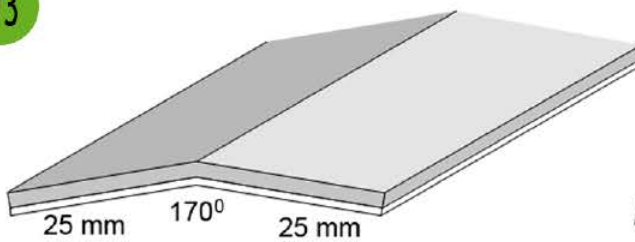
D1



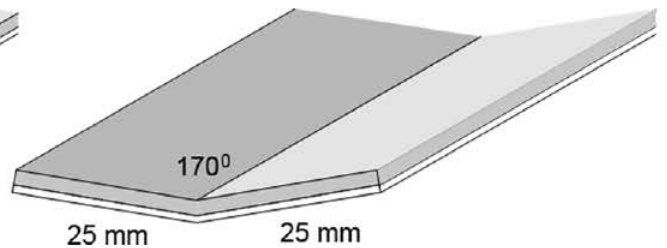
D2



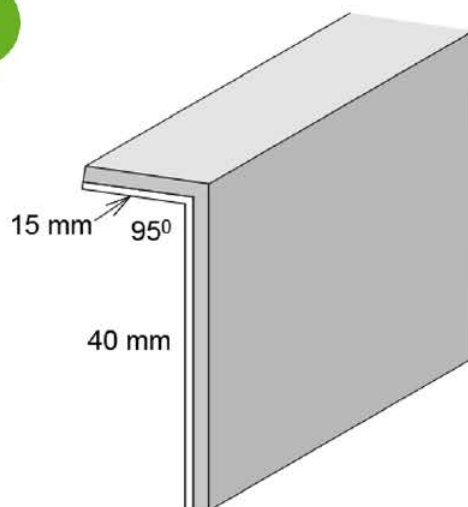
D3



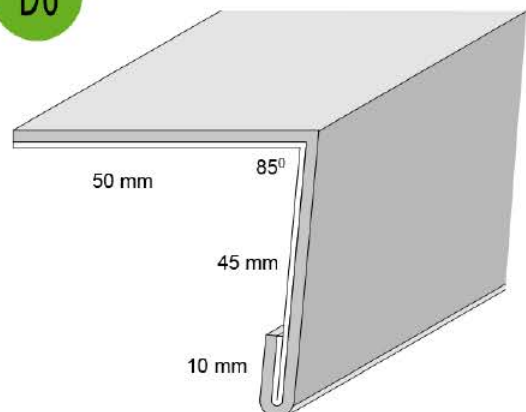
D3R

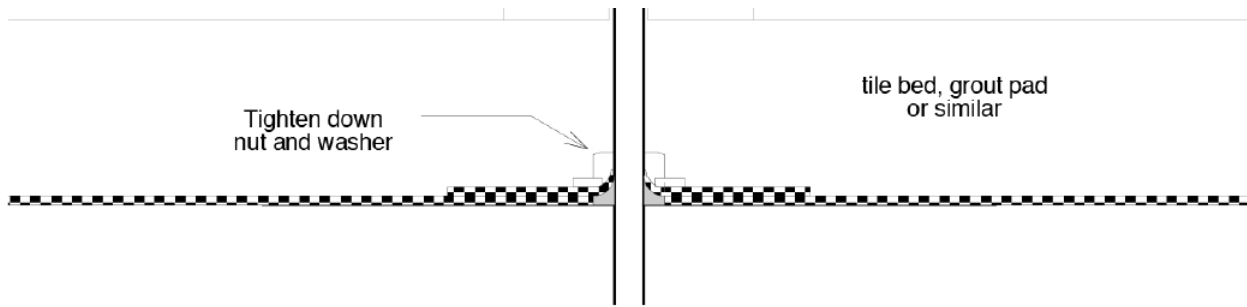


D5

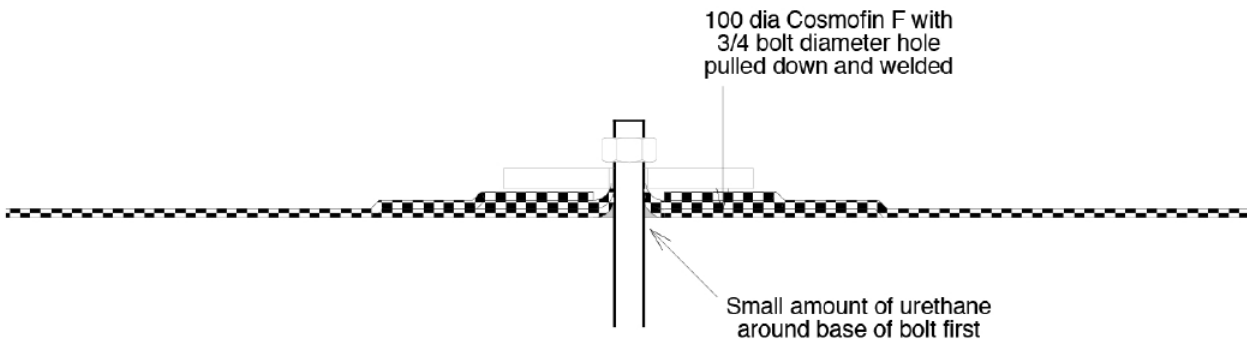


D6





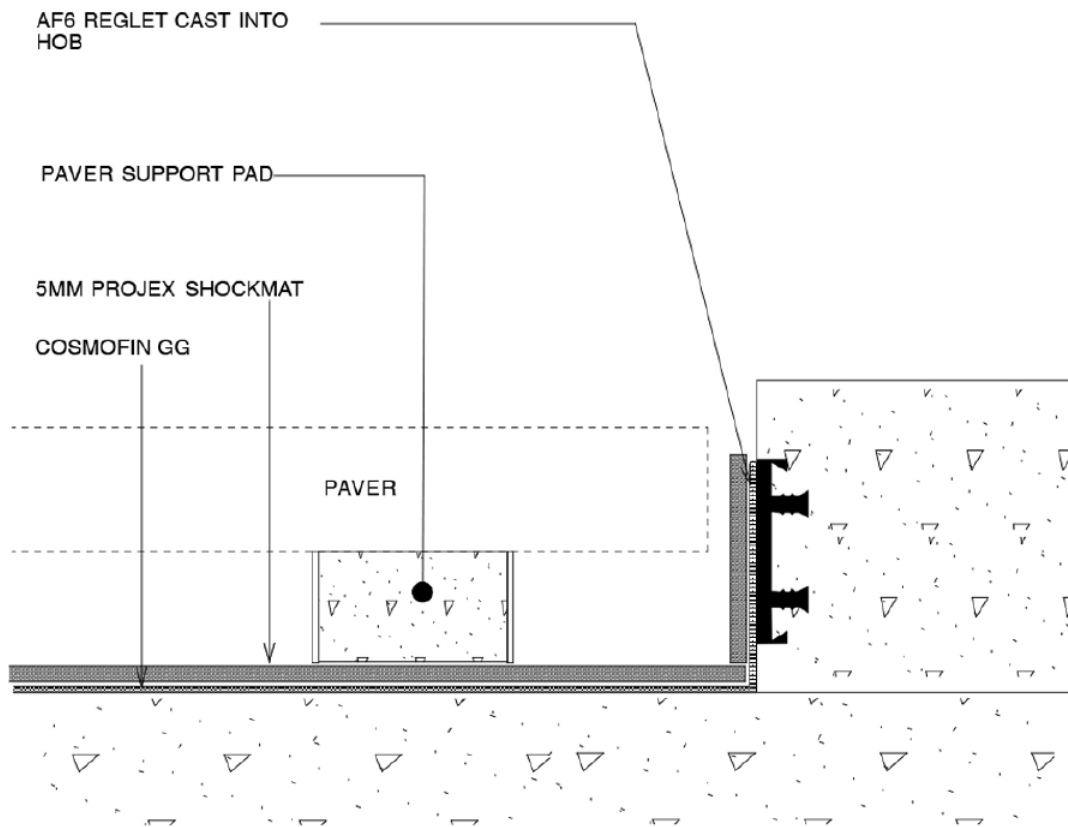
Shows the case where the device is separated from the membrane by a tile bed or similar.
Also drawn to show a bolt drilled later.



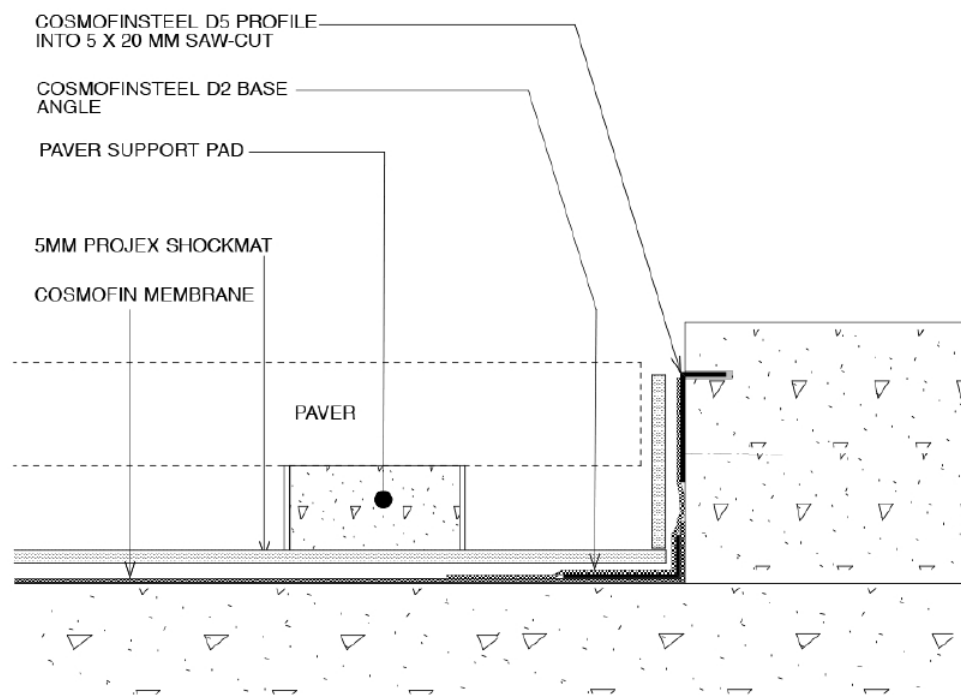
TYPICAL DETAIL AT BOLTS PENETRATING MEMBRANE (HANDRAILS, BASE PLATES, PLANT & EQUIPMENT)

DETAIL SD 9.02

This drawing is intended to show basic principles and set minimum standards. Any variation in site conditions is to be referred to Projex for approval of the required detail. The thickness scale on this drawing is exaggerated for clarity.		COMMENTS / ASSOCIATED DRAWINGS	
© PROJEX GROUP PTY LTD	Standard Guide Details	Bolt Details	Scale: 1: 5
			Date: Feb 2006
			Dwg No: C - 9.02

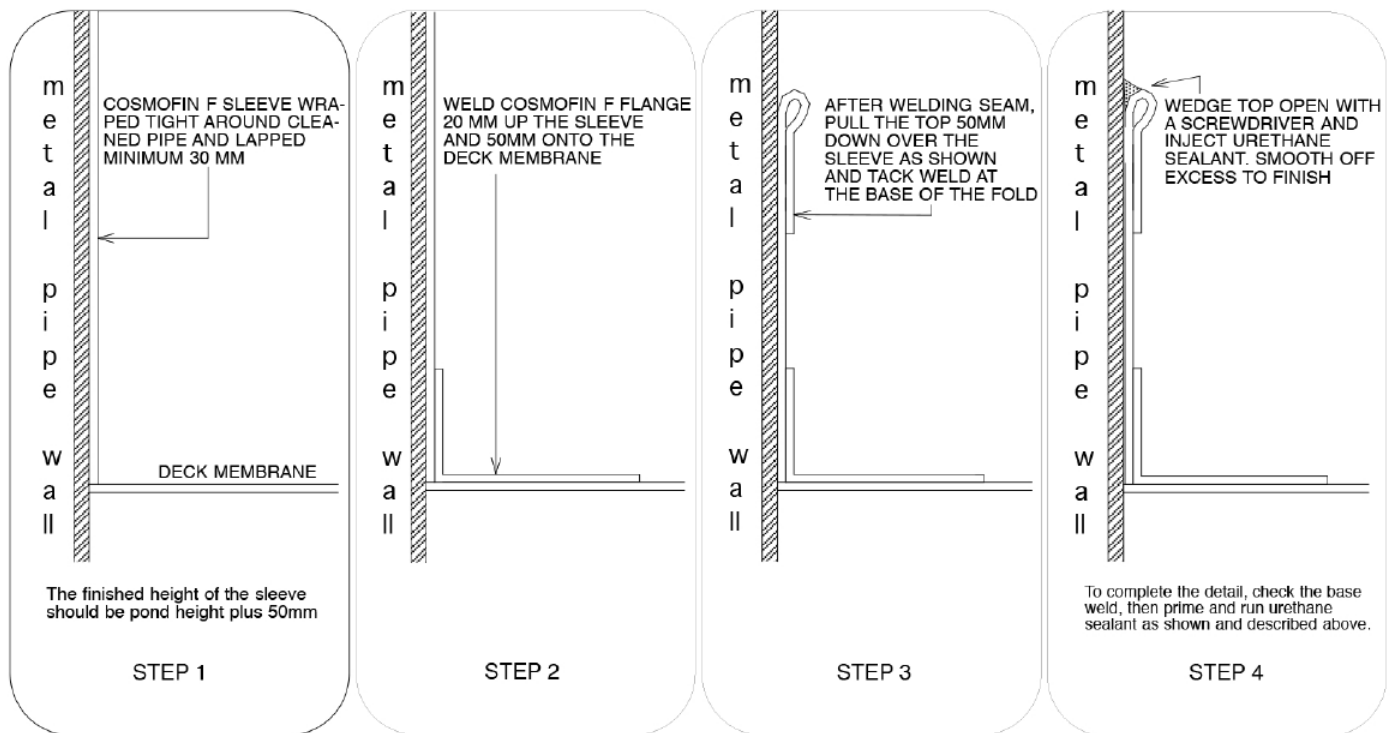


SECTION: TYPICAL HOB DETAIL - PAVER ON PAD



SECTION: TYPICAL HOB DETAIL - PAVER ON PAD

The designs and details shown herein are copyright and may not be used for any purpose other than Wolfin detailing without the written permission of Projex Group Pty Ltd		
PROJEX GROUP PTY LTD - CONCEPT/SHOP DWG.		SCALE: 1:2
		DATE: 20/05/15
		DWG. No: COS-Sk02



The designs and details shown herein are copyright and may not be used for any purpose other than Cosmofin detailing without the written permission of Projex Group Pty Ltd

PROJEX GROUP PTY LTD - CONCEPT/SHOP DWG.

HALF SECTION TYPICAL DETAIL AT METAL PIPE PENETRATION

SCALE: 1:1

DATE: APRIL 2016

DWG. No: WP - 1

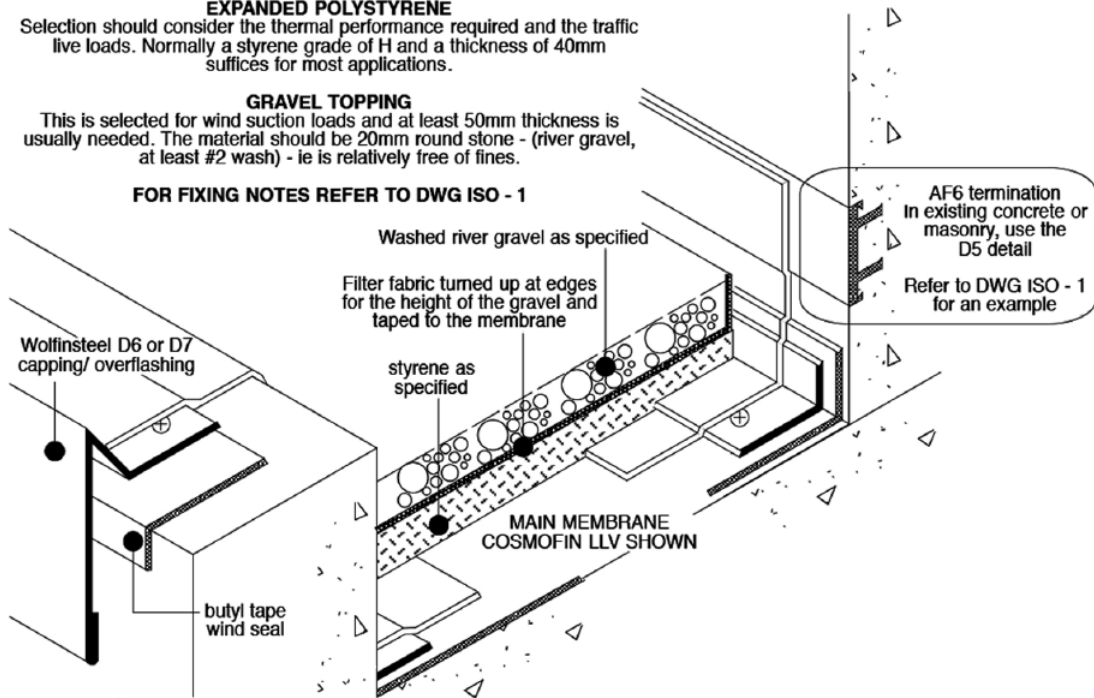
EXPANDED POLYSTYRENE

Selection should consider the thermal performance required and the traffic live loads. Normally a styrene grade of H and a thickness of 40mm suffices for most applications.

GRAVEL TOPPING

This is selected for wind suction loads and at least 50mm thickness is usually needed. The material should be 20mm round stone - (river gravel, at least #2 wash) - ie is relatively free of fines.

FOR FIXING NOTES REFER TO DWG ISO - 1



The designs and details shown herein are copyright and may not be used for any purpose other than Cosmofin detailing without the written permission of Projex Group Pty Ltd

PROJEX GROUP - CONCEPT/SHOP DWG.

TYPICAL INSULATED ROOF INSULATION OVER MEMBRANE (I R M A Roof)

SCALE: N.T.S.

DATE: 2/12/15

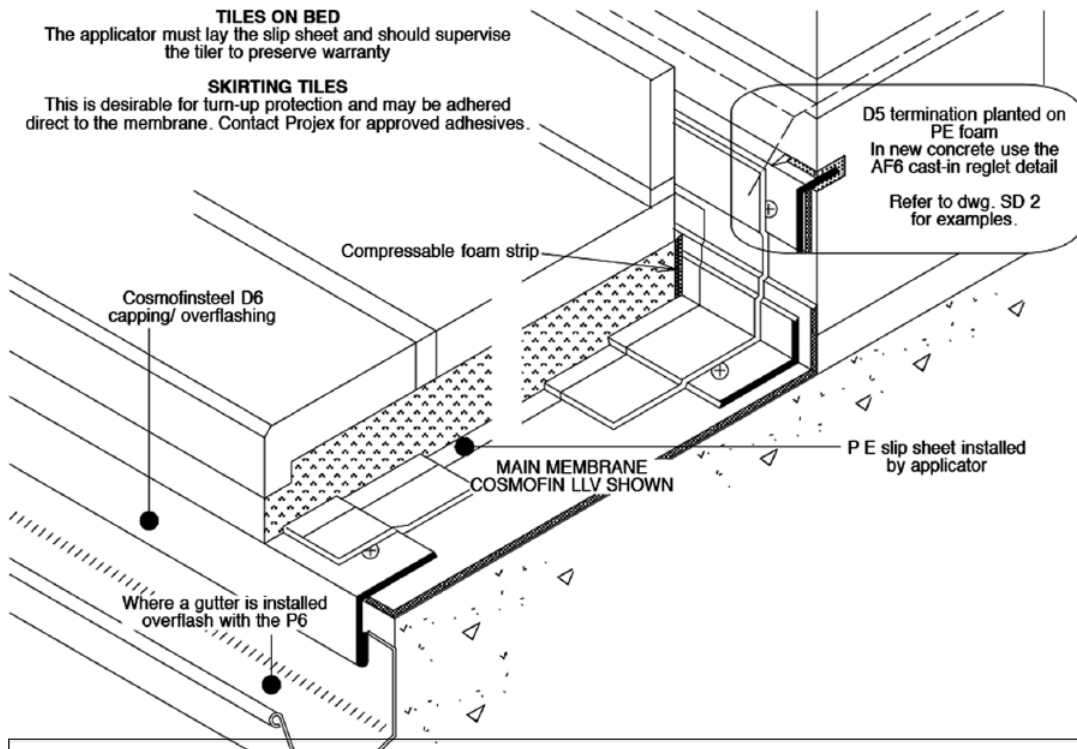
DWG. No: ISO-D- 3

TILES ON BED

The applicator must lay the slip sheet and should supervise the tiler to preserve warranty

SKIRTING TILES

This is desirable for turn-up protection and may be adhered direct to the membrane. Contact Projex for approved adhesives.



The designs and details shown herein are copyright and may not be used for any purpose other than Cosmofin detailing without the written permission of Projex Group Pty Ltd

PROJEX GROUP - CONCEPT/SHOP DWG.

TYPICAL TILED FINISH

SCALE: N.T.S.

DATE: 2/12/15

DWG. No: ISO-D-4

COSMOFINSTEEL FIXINGS

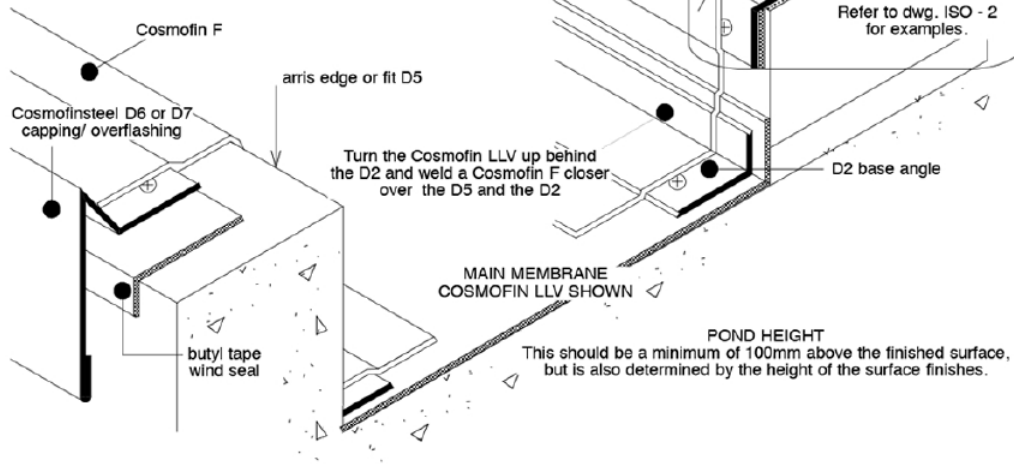
The standard Cosmofinsteel fixings are Hilti nylon anchors at 150 centres. If the structure is timber / FC sheet / plywood, the essential difference is only in the fixings, which will be suitable posidrive screws in lieu.

INSULATION (WHERE USED)

Where a soft substrate (insulation, lightweight concrete) exists below any existing membrane, Projex can advise the fixings to be employed.

FLASHINGS

The D5 detail is to be used whether there are existing flashings/cappings or not. Where flashings exist, bend them out of the way, fit the D5 minimum 25mm below and redress the existing flashing down.



The designs and details shown herein are copyright and may not be used for any purpose other than Cosmofin detailing without the written permission of Projex Group Pty Ltd

PROJEX GROUP - CONCEPT/SHOP DWG.

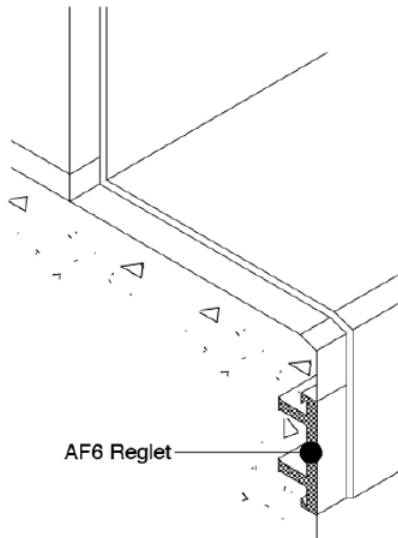
TYPICAL TERMINATIONS
WALL (D5) AND PARAPET (D7)
New or retrofit to concrete or masonry

SCALE: 1:2

DATE: 2/12/15

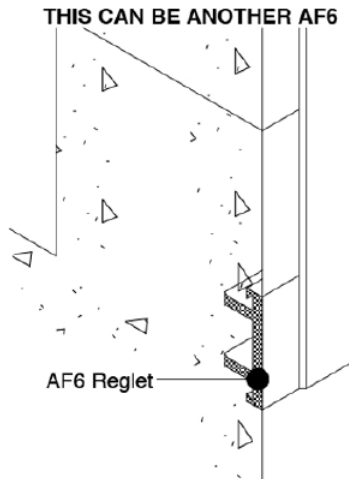
DWG. No: ISO-D-1

**TO TOP TERMINATION
DESIGNED TO SUIT THE STRUCTURE**

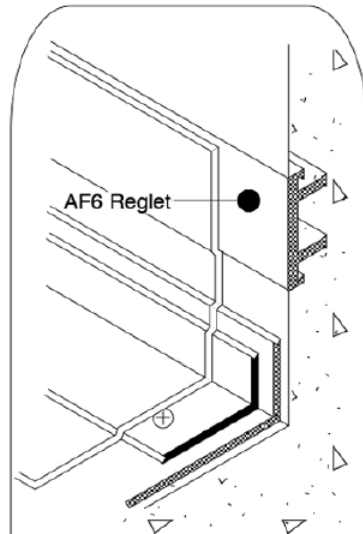


TANKING
OFF-SET FOOTING AND BLOCK WALL

**TO TOP TERMINATION
DESIGNED TO SUIT THE STRUCTURE
THIS CAN BE ANOTHER AF6**



TANKING
SPANNING COLD JOINT
BASE SLAB / WALL



**TYPICAL TERMINATION
AT KERB OR PLINTH**

NOTE
Isolated plinths should be cast by
(or under the supervision of)
the membrane applicator, on a
double layer of the membrane

The designs and details shown herein are copyright and may not be used for any purpose other than Cosmofin detailing without the written permission of Projex Group Pty Ltd

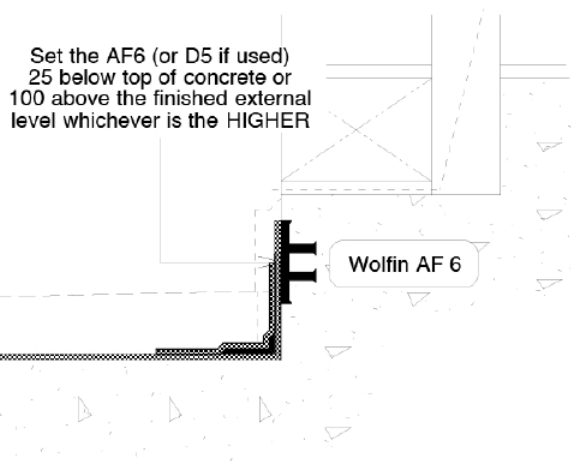
PROJEX GROUP - CONCEPT/SHOP DWG.

TYPICAL TERMINATIONS
(AF6 Reglet)

SCALE: N.T.S.

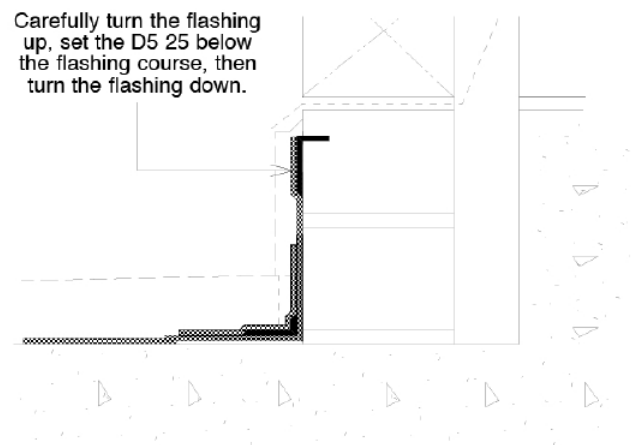
DATE: 2/12/15

DWG. No: ISO-D-2



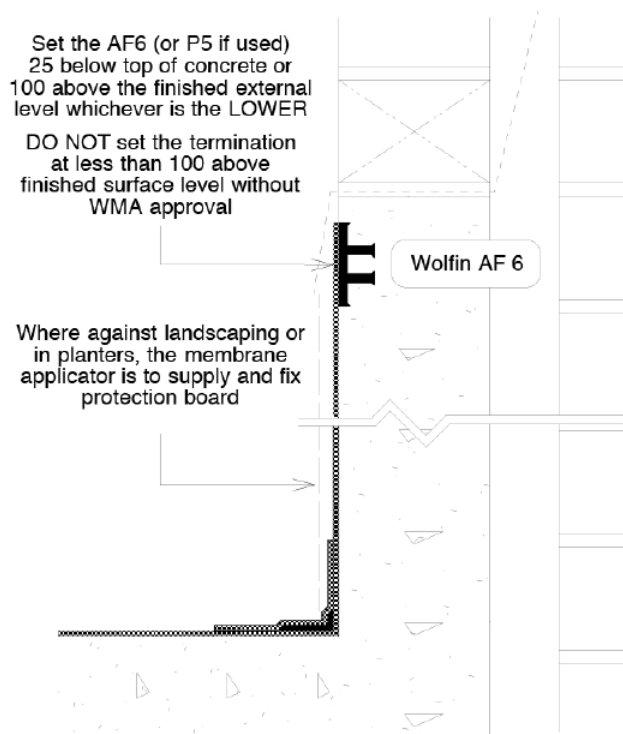
TYPICAL at CONCRETE SETDOWN or HOB
Refer detail 1.01 for general notes

DETAIL SD - 2.01



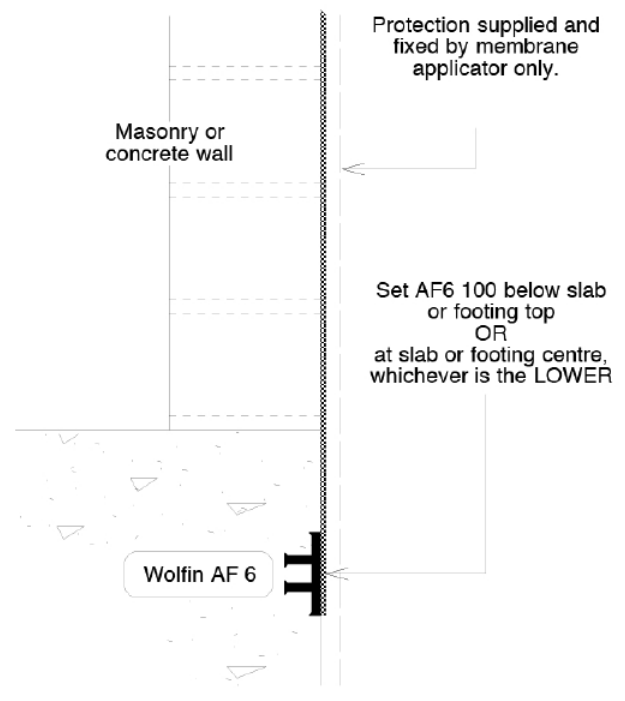
TYPICAL at MASONRY SETDOWN
Refer detail 1.01 for general notes

DETAIL SD - 2.02



TYPICAL at CONCRETE PARAPET UPSTAND
Refer detail 1.01 for general notes

DETAIL SD - 2.03



TYPICAL at RETAINING WALL BASE
Applies either to footing or to slab edge

DETAIL SD - 2.04

This drawing is intended to show basic principles and set minimum standards.
The thickness scale on this drawing is exaggerated for clarity.

COMMENTS / ASSOCIATED DRAWINGS
1. Profile Construction details: refer dwg WSD - 1 & 4.

© PROJEX GROUP PTY LTD

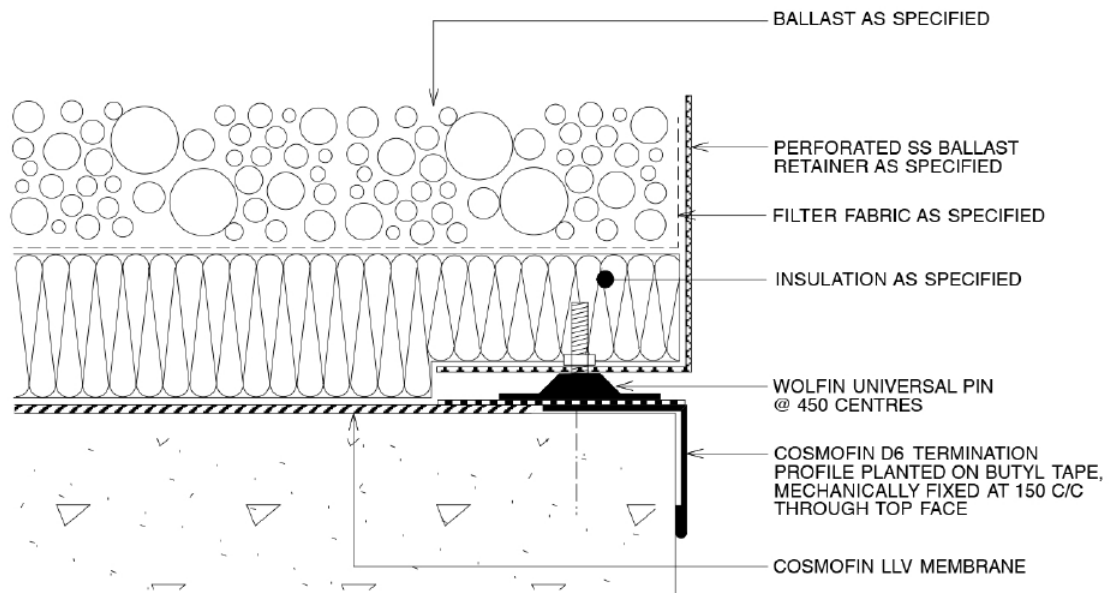
Standard Guide Details

Typical Waterproofing Terminations
Concrete Decks & R / walls
Details SD 2.01 to 2.04

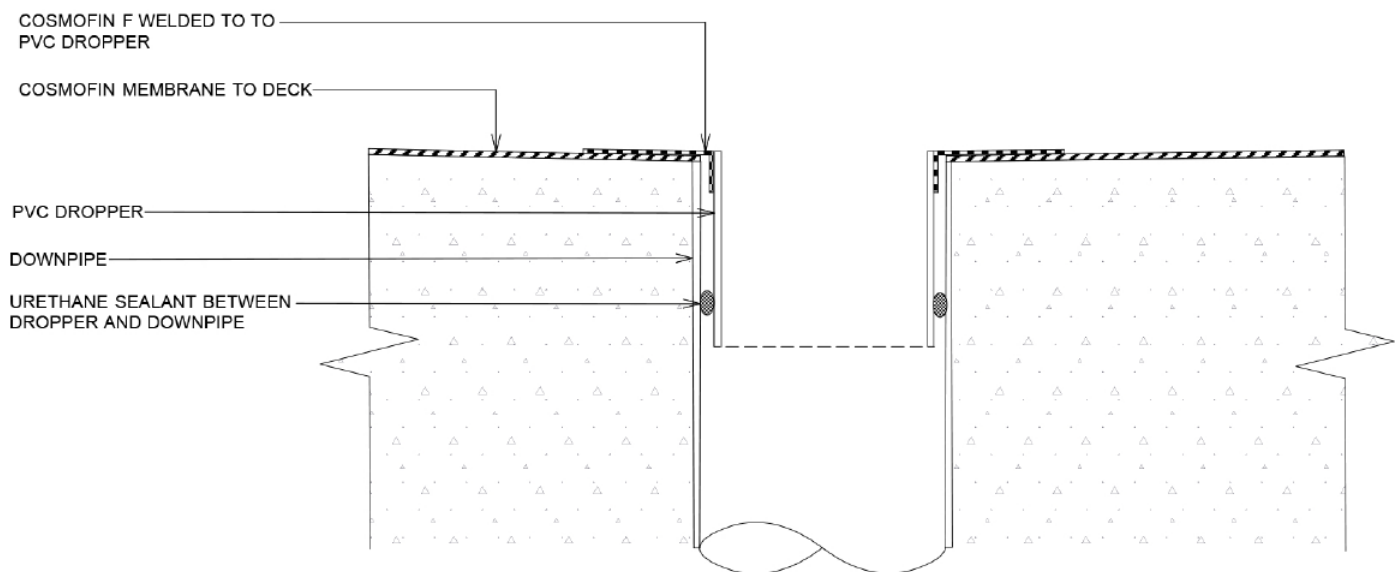
Scale: 1: 5

Date: Jan 2010

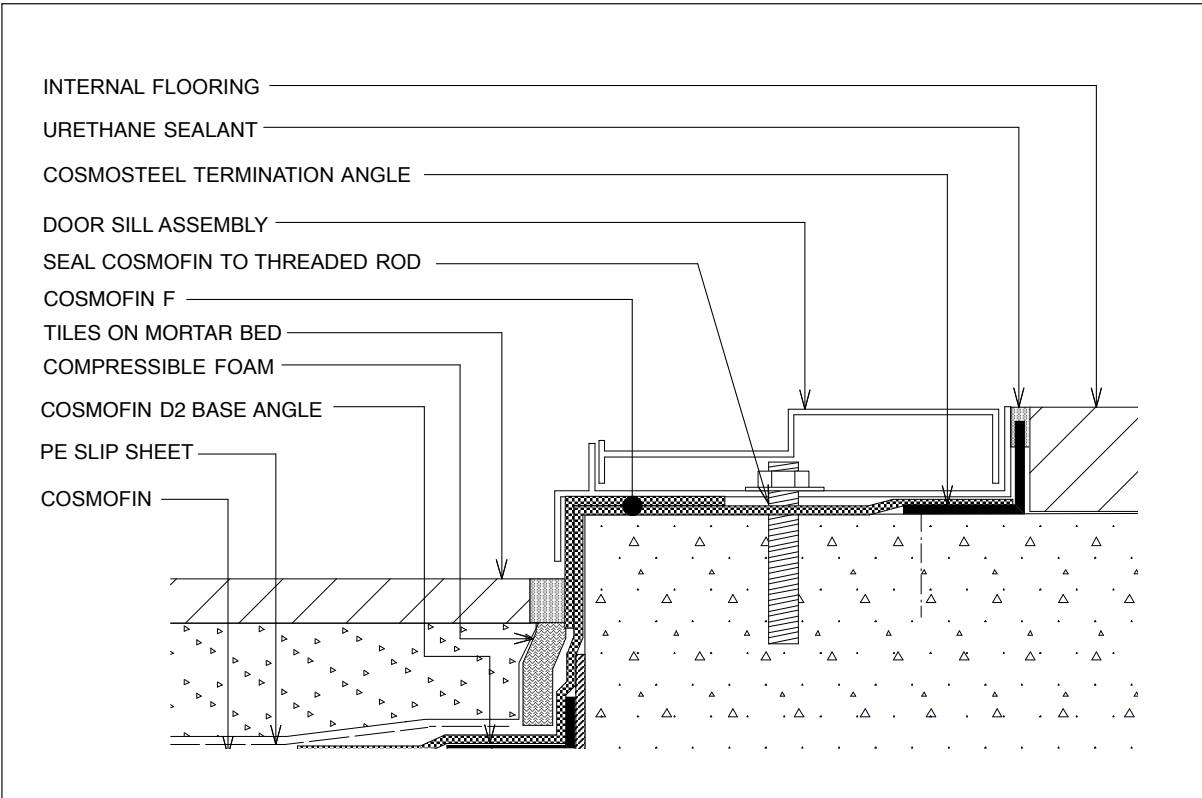
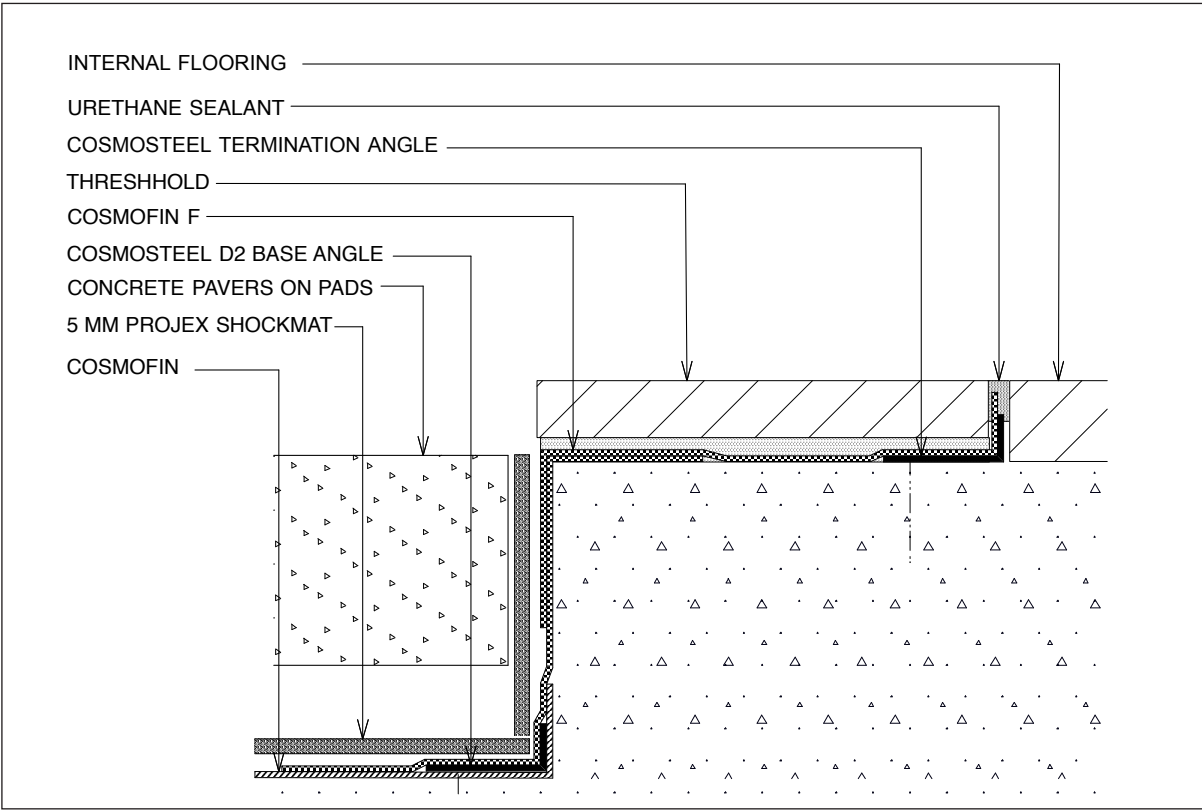
Dwg No: **SD - 2**



The designs and details shown herein are copyright and may not be used for any purpose other than Wolfin detailing without the written permission of Wolfin Membranes Australia Pty Ltd		
WOLFIN MEMBRANES AUSTRALIA - CONCEPT/SHOP DWG.	TYPICAL BALLAST / BALLAST & INSULATION RETAINER DETAIL AT FREE EDGE	SCALE: 1:2
REV: FEB 2016		DATE: FEB 2016
		DWG. No: SD - 18A



The designs and details shown herein are copyright and may not be used for any purpose other than Projex detailing without the written permission of Projex Group Pty Ltd Pty Ltd		
PROJEX GROUP - CONCEPT/SHOP DWG.	COSMOFIN DETAIL: COSMOFIN TO DROPPER INTO DOWNPIPE - NO FLANGE	SCALE: 1:2
		DATE: 29/04/16
		DWG. No: SD - 34



The designs and details shown herein are copyright and may not be used for any purpose other than Wolfen detailing without the written permission of Projex Group Pty Ltd

PROJEX GROUP PTY LTD - CONCEPT/SHOP DWG.

TYPICAL DOOR SILL DETAIL COSMOFIN MEMBRANE SYSTEM

SCALE: N.T.S.

DATE: 31/10/18

DWG. No: SD-38

Technical Information

COSMOFIN FG LL V



COSMOFIN FG LL V is a monomer plasticised, high UV stabilised (LL) PVC waterproofing membrane with integrated glass fleece reinforcing and a polyester fleece backing, based on the long term proven recipe of COSMOFIN. COSMOFIN membranes are produced by extrusion method.

COSMOFIN FG LL V is certified, approved and classified according to:

- EN 13956 CE-Waterproofing of Roofs
- EN 13501-1 (Class E)

- ENV 1187 / EN 13501-5 B_{ROOF} (t1)

Characteristics of COSMOFIN FG:

- Glass fleece reinforcement
- High tensile strength
- Polyester fleece backing
- With LongLife (LL) equipment
- Suited for hot air and solvent welding

- Mouldable when warm (COSMOFIN F)
- Cold resistant
- Recyclable
- Free of cadmium and lead stabilizers
- Resistant to plant roots according to FLL testing and EN 13948 (Type FG)

Membrane type and application areas:

COSMOFIN FG LL V:	integrated reinforcement, tests/test conditions according to EN 13956
Membrane width:	1.060 mm / 1.650 mm
Nominal thickness:	1,5 mm / 1,8 mm / 2,0 mm
New building and refurbishment:	Fully or strip adhered, loose laid under ballast
Colour:	Lt. Grey

System parts and accessories:

- Internal and external corners
- Homogeneous material for detail forming
- Composite Metal Sheets (Plates / coils)
- Stainless steel drainage and ventilation elements
- Lightning Rod Protection Tubes
- Area adhesive (Terokal TK 400, Terokal 3958)

- WITEC Walkway, membrane for maintenance paths
- WITEC KV pro, protection fleece for the installation under ballast
- Joint adhesives (Terokal 914, Terotech Spray Adhesive)

Product information COSMOFIN FG according to EN 13956

EN 13956
Exposed application (fully or stripwise adhered)
Under ballast (gravel, green roof, ...)

*This Technical data sheet was produced according to the latest technical knowledge and standards of Wolfin Bautechnik.
Technical changes due to further developments are possible.*

Characteristic	Testing standard	Unity	Details	Results* 1, 5 mm	Results* 1, 8 mm	Results* 2.0 mm
Visible defects	EN 1850-2	-	passed	passed		
Length	EN 1848-2	m	MDV		15	
Width		m	MDV	1,65		
Straightness		mm	MLV	≥50		
Flatness		mm	MLV	≥10		
Mass per unit area	EN 1849-2	kg/m²	MDV		2,2	
Water tightness	EN 1928 B	kPa	MLV	passed		
Reaction to fire	EN 13501-1	-	s. 5.2.5.2	Class E		
Joint peel resistance	EN 12316-2	N/50 mm	MLV	≥185		
Joint shear resistance	EN 12317-2	N/50 mm	MLV	≥ 600		
Tensile strength	EN 12317-2	N/50 mm	MLV	≥ 400		
Elongation		%	MLV	≥ 30		
Resistance to impact Method A Method B	EN 12691 EN 12691	mm mm	MLV MLV		≥ 500 ≥ 500	
Durability of water tightness against aging	EN 1296 EN 1928	—	passed	passed		
Durability of water tightness against chemicals	EN 1847 EN 1928	—	passed	passed		
Nail tear resistance	EN 13859-1	N	MLV	≥ 400		
Tear resistance	EN 12310-2	N	MLV	≥ 250		
Resistance to root penetration	EN 13948 / FLL	-	passed	passed		
Dimensional stability	EN 1107-2	%	MLV	≥0,5		
Foldability at low temperature	EN 495-5	°C	MLV	≥-25		
UV exposure	EN 1297	visual	passed	passed		
Hail resistance	EN 13583	m/s	MLV	≥17		
Water vapour permeability	EN 1931	-	μ = MDV or 15.000	25.000 ± 5.000		

Explanation: MDV = Manufacturer's declared value
MLV = Manufacturer's limiting value
* Values in new conditions
** Valid for the respective proofed roof structure

*This Technical data sheet was produced according to the latest technical knowledge and standards of Wolfin Bautechnik.
Technical changes due to further developments are possible.*

Technical Information

COSMOFIN FG LL



COSMOFIN FG LL is a monomer plasticised, high UV stabilised (LL) PVC waterproofing membrane with integrated polyester fabric reinforcement based on the long term proven recipe of COSMOFIN FG. COSMOFIN membranes are produced by extrusion method.

COSMOFIN FG LL V is certified, approved and classified according to:

- EN 13956 CE-Waterproofing of Roofs
- DIN V 20000-201 (Dachabdichtungen)
- DIN 18531 (Waterproofing of Roofs)

- EN 13501-1 (Class E)
- DIN 4102-1 (B2)
- ENV 1187 / EN 13501-5 B_{ROOF} (t1)
- DIN 4102-7 (External Fire)

Designation according to DIN V 20000-201: **DE/E1 PVC-P-NB-V-(PW)-1,5 (1,8 / 2,0)**

Characteristics of COSMOFIN FG:

- Polyester fabric reinforcement
- High tensile strength
- With LongLife (LL) equipment
- Suited for hot air and solvent welding
- Resistant to plant roots according to FLL testing and EN 13948

- Mouldable when warm (COSMOFIN F)
- Cold resistant
- Recyclable
- Free of cadmium and lead stabilizers

Membrane type and application areas:

COSMOFIN FG LL:	integrated reinforcement, tests/test conditions according to EN 13956
Membrane width:	1.060 mm / 1.650 mm
Nominal thickness:	1,5 mm / 1,8 mm / 2,0 mm
New building and refurbishment:	Mechanical fastening, loose laid under ballast
Colour:	grey, further colours on request

System parts and accessories:

- Internal and external corners
- Homogeneous material for detail forming
- Composite Metal Sheets (Plates / coils)
- Stainless steel drainage and ventilation elements
- Lightning Rod Protection Tubes

- WITEC Walkway, membrane for maintenance paths
- WITEC KV pro, protection fleece for the installation under ballast
- Joint adhesives (Terokal 914, Terotech Spray Adhesive)

Product information COSMOFIN FG according to EN 13956

EN 13956
Exposed application (mechanical fastening)
Under ballast (gravel, green roof, ...)

*This Technical data sheet was produced according to the latest technical knowledge and standards of Wolfin Bautechnik.
Technical changes due to further developments are possible.*

Characteristic	Testing standard	Unity	Details	Results* 1, 5 mm	Results* 1, 8 mm	Results* 2.0 mm
Visible defects	EN 1850-2	-	passed	passed		
Length	EN 1848-2	m	MDV	20	17,5	17,5
Width		m	MDV	1,06 / 1,65		
Straightness		mm	MLV	≥50		
Flatness		mm	MLV	≥10		
Mass per unit area	EN 1849-2	kg/m²	MDV	1,9	2,3	2,5
Water tightness	EN 1928 B	kPa	MLV	passed		
External fire performance	EN V 1187	-	Annex E	B _{Roof} (t1)** Resistant to flying sparks and radiation heat according to AbP		
Reaction to fire	EN 13501-1	-	s. 5.2.5.2	Class E		
Joint peel resistance	EN 12316-2	N/50 mm	MLV	≥300		
Joint shear resistance	EN 12317-2	N/50 mm	MLV	≥ 800		
Tensile strength	EN 12317-2	N/50 mm	MLV	≥ 1000 / ≥900		
Elongation		%	MLV	≥ 10		
Resistance to impact Method A	EN 12691	mm	MLV	600	≥ 700	750
Method B	EN 12691	mm	MLV	600	≥ 700	750
Resistance to static load	EN 12730 Method B	kg	MLV	≥ 20		
Durability of water tightness against aging	EN 1296 EN 1928	—	passed	passed		
Durability of water tightness against chemicals	EN 1847 EN 1928	—	passed	passed		
Nail tear resistance	EN 13859-1	N	MLV	≥ 400		
Tear resistance	EN 12310-2	N	MLV	≥ 250		
Resistance to root penetration	EN 13948 / FLL	-	passed	passed		
Dimensional stability	EN 1107-2	%	MLV	≥1.0		
Foldability at low temperature	EN 495-5	°C	MLV	≥-25		
UV exposure	EN 1297	visual	passed	passed		
Hail resistance	EN 1297	m/s	MLV	≥25		
Water vapour permeability	EN 1931	-	μ = MDV or 15.000	25.000 ± 5.000		

Explanation: MDV = Manufacturer's declared value
MLV = Manufacturer's limiting value
* Values in new conditions
** Valid for the respective proofed roof structure

*This Technical data sheet was produced according to the latest technical knowledge and standards of Wolfin Bautechnik.
Technical changes due to further developments are possible.*



Cosmofin Warranty

On completion of the work Cosmofin provide a warranty to the client valid for the nominated time period, that the materials as supplied are in full accordance with the specification & warranted against defects from the manufacturer.

PROJEX GROUP PTY LTD

PH: (02) 8336 1666 | e-mail: mail@projex.com.au | website: www.projex.com.au
www.facebook.com/projexgroupsolutions/