

OUTSULATION[®] SYSTEM



An Exterior Wall Insulation and Finish System

DUK 204

Outsulation[®] System Application Instructions

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SYSTEM APPROVALS

The Dryvit Outsulation System is the subject of a wide range of third-party certification and approval schemes from the UK and Europe's leading Certification and Approval bodies.

Our comprehensive portfolio of testing and approvals provide users, architects, specifiers and building control additional reassurance and peace of mind that the system meets the relevant requirements of the Building Regulations, latest product standards and confirms that the system is fit for purpose and provides a durable construction solution.

BBA approval

BBA Certificate 98/3548 – Dryvit External Wall Insulation Systems - Product Sheet 7 - Dryvit Outsulation External Wall Insulation System.



ETA approvals

European Technical Approval (ETA) Certificates from ITB ETA-16-0426 Dryvit Outsulation DM, 16/0849 Dryvit Outsulation E and 16-0558 Outsulation NCB.



For further details on the full scope of these approvals contact Dryvit UK Ltd.

LIST OF DRYVIT BROCHURES AND PUBLICATIONS REFERENCED IN THIS DOCUMENT

Product type	Product name	Data sheet reference
Adhesive only	ADEPS	DS.EN.04.50.10
	AP Adhesive	DS.EN.04.50.16
Adhesives and base coats	Genesis	DS.EN.04.50.03
	Primus	DS.EN.04.50.04
	Genesis DM Plus (grey and white)	DS.EN.04.50.15
Levelling and repair	RapidPatch	DS.EN.04.50.20
	Stucco Build	DS.EN.04.53.04
Base coat only	NCB	DS.EN.04.50.06
	Dryflex	DS.EN.04.50.11
Primers	Primax	DS.EN.04.51.01
	Color Prime	DS.EN.04.51.02
	Color Prime S	DS.EN.04.51.03
	Primesil	DS.EN.04.51.05
Finishes	TR	DS.EN.04.52.05
	PMR	DS.EN.04.52.08
	SLK	DS.EN.04.52.11
	HDP	DS.EN.04.52.13
	FD PMR	DS.EN.04.52.14
	Drytex	DS.EN.04.53.01
	Dash Receiver	DS.EN.04.53.08
	Weatherlastic Finishes	DS.EN.04.54.10
Speciality finishes	Ameristone	DS.EN.04.52.01
	TerraNeo	DS.EN.04.52.02
	Stone Mist	DS.EN.04.52.03
	Stone Mist T	DS.EN.04.52.04
	Custom Brick	DS.EN.04.52.09
	Skimit	DS.EN.04.52.10
	Limestone	DS EN 04 52 16
	Drytex WOOD Effect System	DS.EN.04.53.03
	Brick Effect	DS.EN.04.53.07
	Reflectit	DS.EN.04.54.05
	Tuscan Glaze	DS.EN.04.54.06
	Weatherlastic Adobe	DS.EN.04.54.10
Coatings and sealers	Silstar	DS.EN.04.54.01
	Demandit Smooth	DS.EN.04.54.02
	Colorsil	DS.EN.04.54.03
	Demandit Sanded	DS.EN.04.54.08
	Weatherlastic Smooth	DS.EN.04.54.09
	SealClear	DS.EN.04.54.11
	HDP Water-Repellent Paint (HyDroPhobic)	DS.EN.04.54.20
Sealer for openings and joints	AquaFlash	DS.EN.04.56.10
Air and moisture barriers	Backstop NT – Smooth and Texture	DS.EN.04.56.03
Mesh	Reinforcing mesh	DS.EN.04.56.01
Insulation and fire breaks	Square Edge EPS (White)	DS.EN.04.56.07.1
	Square Edge LL EPS (Grey)	DS.EN.04.56.07.2
	Mineral Wool HD (fire break)	DS.EN.04.56.08.2

Product type	Product name	Data sheet reference
Ancillary items	FF197 Expanding Foam	Available on request
	PU010 Adhesive Foam	
	Borocol Rh5 - Biocide	
	Aluminium Starter Track	
	Starter Track connectors	
	Corner Bead with Mesh	

Product type	Product name	Data sheet reference
Dryvit reference documents	Dryvit Information Sheets	DIS Series
	Technical Guidance Notes	GN Series
	AquaFlash Installation Guide	DUK 176
	Details for solid substrates	DUK 964
	Details for steel framing systems (SFS)	DUK 107

I. General installation requirements

A. Project conditions

1. Health and safety

- a. Always wear appropriate PPE for the task undertaken including the use of suitable protective clothing, dust mask and eye protection where specified.
- b. Refer to individual product Safety Data Sheets (SDS) for full information.

2. Storage

- a. All products should be stored off the ground, in sealed packaging and protected at all times from rain or water exposure.
- b. Products should be stored away from prolonged exposure to direct sunlight.
- c. Maximum storage temperature shall not exceed 38°C. Minimum storage temperature shall not be less than 4°C except for the following products:

Product	Minimum storage temperature (°C)
Demandit Smooth and Demandit Sanded	7°C
Ameristone, TerraNeo and Limestone	10°C

- d. Dryvit Square Edge EPS (White) and LL EPS (Grey) shall be stored out of direct sunlight and away from highly flammable substances.
- e. Refer to individual product data sheets for full storage information.

3. Application

- a. Application of wet materials shall not take place during inclement weather unless appropriate protection is provided.
- b. All materials shall be protected from inclement weather until they are completely dry.
- c. Before application of Dryvit products, the air and surface temperatures must be 4°C or above and must remain so for a minimum of 24 hours or until the product is dry, except for the following products:

Product	Minimum air and surface temperature (°C)
FD PMR	1°C
Demandit Smooth, Demandit Sanded, Stone Mist and Stone Mist T	7°C
Ameristone, TerraNeo and Limestone	10°C

- d. These temperatures shall be maintained with adequate air ventilation and circulation for a minimum of 24 hours (48 hours for Ameristone, TerraNeo and Limestone) thereafter, or until the products are completely dry.
- e. Cool, humid conditions may extend the required drying time.
- f. Refer to individual product data sheets for full application information.

B. Inspection of substrate

1. General

- a. The system is suitable for use on solid or framed constructions. Common substrates include, in-situ concrete, pre-cast concrete, blockwork, brick, render, no-fines concrete, exposed aggregate panels and a wide range of sheathing carried on light gauge steel frames. Dryvit UK should be consulted for further information on acceptable substrates.
- b. The substrate must be clean, dry, structurally sound, free of loose material, voids, projections, hot spots, release agents, coatings, or other materials that may affect adhesion.
- c. Wall sheathing must be installed in accordance with manufacturers requirements and securely fastened in accordance with the contract documents.
- d. There shall be no planar irregularities greater than 12 mm within any 3 m radius. On solid substrates any irregularities over this limit will require re-profiling using Stucco Build. Further guidance on planar irregularities for solid and sheathing is provided in the table in Section [V.C.1.](#)

C. Flashing at system terminations

Refer to the Dryvit Outsulation System Installation Details for further information and guidance on all standard system details.

1. General

- a. Ensure that flashing is installed in accordance with the relevant installation requirements and the contract documents. The preparation of openings should be considered for steel framing systems (SFS) substrates.

2. Transition at roof lines

- a. Ensure the roof has positive drainage, i.e. all runoff shall be directed to the exterior and away from the structure.
- b. Roof flashing shall be installed in accordance with industry guidelines, manufacturer's instructions and contract documents.
- c. Runoff diverters shall be installed in accordance with industry guidelines, manufacturer's instructions and contract documents. Attention must be paid to the eaves/chimney intersections and sloped roof/wall intersections.
- d. Hold the system a minimum of 200 mm above flat roofs.

3. Openings

- a. Prior to the installation of windows/doors and other system components on to SFS, the heads, jambs and cills of all openings may be prepared with AquaFlash (or other approved flashing material). This product may also be used on solid substrates, refer to Dryvit UK Ltd.
- b. Continuous flashing at heads of openings are specified and installed as indicated in the contract documents and Dryvit Outsulation System Installation Details.
- c. For windows or doors that do not have integral flashing, a field-applied flashing shall be installed in accordance with industry guidelines, manufacturer's instructions and contract documents.
- d. Cill piece shall extend to the inside face of wall and continue a minimum of 300 mm up at the jambs.
- e. Individual windows that are ganged to make multiple units require that the heads be continuously flashed and the joints between the units are fully sealed.

4. **Roof junctions and decks**

- a. Wood decks and roof junctions shall be properly flashed prior to system application.
- b. Where the system terminates above poured decks, patios, landings, etc. they must be properly sloped and waterproofed to direct water away from the walls.

5. **Utilities**

- a. Provisions must be made to ensure that the system terminates properly at lighting fixtures, electrical outlets, hose bibs, dryer vents, satellite dishes etc.

Note: It is the responsibility of the client/main contractor to assess existing extract ducts and extend the flues. Any works to boilers should be carried out by a registered Gas Safe engineer.

6. **Grade level terminations**

- a. The system shall be terminated a minimum of 150 mm above finished grade. Refer to the Dryvit Outsulation System Installation Details for above and below grade termination guidance.

D. Sealants/seals

1. **General**

- a. Dryvit materials shall be completely dry prior to installation of sealant materials (typically 48 to 72 hours). Humid or cool conditions may further extend drying times.
- b. For compressible seals refer to the manufacturers installation instructions.
- c. Substrate to receive frame seals should be free of contamination and installed in accordance with manufacturers installation instructions.

E. Wind loading

1. **General**

- a. Dryvit UK Ltd are responsible for the design of the EWI cladding system and the design of its attachment to the wall.
- b. Prior to system installation, the maximum design wind pressure (load) for the structure must be verified in accordance with national regulations and requirements. Dryvit UK Ltd will undertake fixing pull out and/or pull-off tests and undertake a wind loading assessment in accordance with BS EN 1991-1-4 or alternatively if wind loadings are supplied by a third-party engineer, will use these wind loads to verify the adequacy of the fixing design. Based on these calculations, the method of fixing and the required fixing pattern can be determined. The fixing recommendations require approval from the Design Engineer before the commencement of the installation.
- c. Dryvit UK Ltd will also provide information on the system dead weights to allow an independent check of the existing substrate wall by the clients engineer.
- d. The Main Contractor and/or Architect and/or Owner must be notified the of any discrepancies from the approved method. Installation shall not proceed until any unsatisfactory conditions are corrected.

- e. Under the Building Regulations Approved Document A – Structure, there is an obligation placed on the client such that they must provide supporting evidence as part of the Building Regulations application to justify that the building is capable of transferring dead, imposed and wind loads to the ground safely allowing for any additional loadings that are imparted to the structure as a result of the new EWI system being applied. This structural check does not form part of the Dryvit UK Ltd's scope of works and therefore the client should appoint a suitably qualified structural engineer to be responsible for the global stability of the building and ensure that this assessment is included within the building regulation application.
- f. Dryvit UK Ltd will not accept any responsibility for any failure caused to the EWI system as a result of any failures in supporting structure and foundations however it is caused.

II. Materials required for the installation of the Outsulation System

A. Materials supplied by Dryvit UK Ltd.

The project specification will identify the project specific materials necessary to complete the application of the system.

1. AquaFlash and AquaFlash Mesh.
2. Backstop NT Smooth and Backstop NT Texture and Grid tape.
3. Starter track, termination, movement joint and corner beads etc.
4. Dryvit Adhesives: Genesis, Primus, Genesis DM Plus, ADEPS, AP Adhesive (when required) and PU010 Adhesive Foam.
5. Dryvit Square Edge EPS (White) meeting the requirements of EN 13163, Euroclass E, fire retardant grade, Grade 70E.
6. Dryvit Square Edge LL EPS (Grey) meeting the requirements of EN 13163, Euroclass E, fire retardant grade, Grade 70E or 100E.
7. Mineral wool fire break HD Slab meeting the requirements of EN 13162, Euroclass A1.
8. Dryvit Expanding Foam: FF197 fire retardant expanding foam.
9. Base coats: Genesis, Primus, Genesis DM Plus, RapidPatch, Dryflex and NCB.
10. Dryvit reinforcing meshes: Standard Plus 150, Standard Plus 160, Standard Plus 200, Intermediate 370, Panzer 260, Panzer 500, Panzer 700, Corner and Detail Mesh.
11. Dryvit primers: Color Prime, Color Prime S, Prime Sil and Primax.
12. Dryvit finishes; PMR, FD PMR, HDP, SLK, Brick Effect, Custom Brick, Dash Receiver and Dash Aggregate, Drytex, Drytex WOOD Effect System, Skimit, Reflectit, Tuscan Glaze, Wood Glaze, Ameristone, TerraNeo, Stone Mist, Stone Mist T, Limestone, TR, and Weatherlastic.
13. Dryvit coatings: Demandit Smooth, HDP Water-Repellent Coating, Silstar, Demandit Sanded, Weatherlastic Smooth, ColorSil and SealClear.
14. Fixtures and fittings – Dryvit Spiral Anchors, Dryvit Anchor Point Sleeves and other innovative fixtures and fitting solutions compatible for use with Dryvit External Wall Insulation Systems.

B. Materials supplied by others

1. **General**
 - a. Steel stud framing and sheathing boards
 - b. Cement meeting the requirements of EN 197-1 type CEM I or CEM II (grey or white)
 - c. Clean potable water
 - d. Joint sealant
 - e. Compressible polyurethane joint sealing tape – Contact Dryvit for information

III. Mixing Instructions

A. General

Warning: Under no circumstances shall, additives such as sand, aggregates, rapid binders, anti-freeze, accelerators, etc. be added to any Dryvit materials. Such additives will adversely affect the performance of the material and void all warranties.

Due to shipping and storage, there may be some separation of bucket materials. Prior to use, remix the material thoroughly using a Dryvit recommended mixing paddle, powered by a slow speed drill.

Buckets should be opened using a utility knife or Dryvit Bucket Opener.

For full mixing instructions follow the instructions given on the relevant product data sheet.

B. Opening preparation materials

1. AquaFlash

- a. AquaFlash is supplied ready to use, remix the contents of the pail thoroughly prior to application.

C. Air and moisture barrier

1. Backstop NT Smooth and Backstop NT Texture

- a. Backstop NT is supplied ready to use, remix the contents of the pail thoroughly prior to application.

D. Adhesive and base coat material

1. Genesis and Primus

- a. Mix the material thoroughly with a Dryvit recommended mixing paddle, powered by a slow speed drill. Do not over-mix or use other types of mixing blades as air entrapment and product damage may occur resulting in workability and performance problems.
- b. Pour half of the freshly mixed material, approximately 11.5 kg, into a clean plastic container.
- c. Add 11.5 kg (approximately a half of a bag) of fresh, lump free cement meeting the requirements of EN 197-1 type CEM I or CEM II. Either grey or white cement is acceptable. Add cement slowly and mix thoroughly. Do not add large quantities of cement at one time.
- d. Clean potable water may be added to the mixture to adjust the workability. Add as little water as possible, in small increments, and only after the cement is thoroughly wetted and mixed. Do not over-water as this will degrade the performance and promote efflorescence.
- e. Add one litre of water prior to adding the cement. Additional water may be added to adjust workability.
- f. Mix the Genesis or Primus material with cement thoroughly; then wait five minutes and mix again to break the initial set.
- g. Retempering with a small amount of water is permissible provided the mixture has not set. Genesis typically requires slightly more water than Primus.
- h. The mixed product has a pot life similar to any cement based material.
- i. Mix only as much material as can be conveniently used during a work period.

2. Genesis DM Plus (grey and white)

- a. To a clean 20 litre pail, add 5.5 to 6.0 litres of clean potable water.
- b. Add the Genesis DM Plus slowly while constantly mixing with a Dryvit recommended mixing paddle, powered by a slow speed drill.
- c. Slowly add powder and mix for five minutes until homogenous.
- d. Allow to stand for five minutes then re-mix, adding a small amount of water if required.
- e. The adhesive may stiffen on standing.
- f. Re-mix the product to regain a workable consistency, but do not add more water.
- g. Material must be free of lumps before applying.

3. RapidPatch (only use for small areas of repair).

- a. To a clean 5 or 10 litre pail add 1.3 to 1.5 litres of clean potable water.
- b. Add the RapidPatch slowly while constantly mixing with a Dryvit recommended mixing paddle, powered by a slow speed drill.
- c. Thoroughly mix until uniformly wetted, adjusting consistency with a small amount of water or RapidPatch.
- d. Allow to stand for four to five minutes.
- e. Retemper, adding a small amount of water if necessary.
- f. Material must be free of lumps before using.
- g. The pot life of RapidPatch is 20 to 30 minutes dependent on temperature.

E. Adhesive Only

1. ADEPS

- a. ADEPS is supplied ready to use, remix the contents of the pail thoroughly prior to application.

2. AP Adhesive

- a. Supplied in a ready to use tube. Insert into application gun (sold by Dryvit UK Ltd) and cut the smallest opening possible in the nozzle and apply.

3. PU 010 Adhesive Foam

- a. Supplied in a ready to use canister. Shake the canister vigorously at least 20 times remove the protective cap and screw onto the foam gun (sold by Dryvit UK Ltd) and apply.

F. Base coat materials only

1. Dryflex

- a. Pour half of the freshly mixed material, approximately 9.5 kg, into a clean plastic container.
- b. Add 9.5 kg (approximately a third of a bag) of fresh, lump free cement meeting the requirements of EN 197-1 type CEM I and CEM II. Either grey or white cement is acceptable. Add cement slowly and mix thoroughly with a Dryvit recommended mixing paddle, powered by a slow speed drill.
- c. Do not add large quantities of cement at one time.
- d. Do not over-mix or use other types of mixing blades as air entrapment and product damage may occur resulting in workability and performance problems.
- e. Clean potable water may be added to the mixture to adjust the workability. Add as little water as possible, in small increments, and only after the cement is thoroughly mixed.
- f. Do not over-water as this will degrade the performance and promote efflorescence.
- g. Allow to stand for five minutes then re-mix, adding a small amount of water if required.
- h. The mixture has a pot life similar to any cement based material.
- i. Mix only as much material as can be conveniently used during a work period.

2. NCB

- a. Mix NCB to a smooth, homogeneous consistency with a Dryvit recommended mixing paddle.
- b. A small amount of clean potable water may be added to adjust workability.

G. Primers

1. Color Prime, Color Prime S, Prime Sil and Primax

- a. Primers are supplied ready to use, mix the material with a Dryvit recommended mixing paddle, powered by a slow speed drill to a homogeneous consistency.

H. Finishes

1. **PMR - Quarzputz, Sandpebble 2, Sandpebble, Sandpebble Fine, Sandblast, Freestyle and Limestone.**
2. **FD PMR - Quarzputz, Sandpebble and Sandpebble Fine.**
3. **HDP - Quarzputz, Sandpebble, Sandpebble Fine, Sandblast, Freestyle and Limestone.**
4. **Weatherlastic – Quarzputz, Sandpebble and Sandpebble Fine.**
5. **SLK - Quarzputz, Sandpebble and Sandblast.**
6. **TR - Quarzputz, Sandpebble 2, Sandpebble, Sandpebble Fine, Sandblast and Freestyle, Limestone.**

- a. Finishes are supplied ready to use, mix the material with a Dryvit recommended mixing paddle, powered by a slow speed drill to a homogeneous and uniform consistency.
- b. A small amount of clean potable water may be added to adjust workability.
- c. Always add the same amount of water to each pail within a given lot to avoid colour variation.

7. **Drytex**

- a. Carefully measure 5.0 to 6.0 litres of water into a plastic bucket for one 25 kg bag. Slowly add the powder and using a Dryvit recommended mixing paddle, powered by a slow speed drill, mix for five minutes until homogenous.
- b. Allow to stand for five minutes then re-mix prior to application.
- c. The render may stiffen on standing. Re-mix the product to regain a workable consistency, but do not add more water.

8. **Dash Receiver**

- a. Carefully measure 6.5 litres of water into a plastic bucket for one 25 kg bag. Slowly add powder and using a Dryvit recommended mixing paddle, powered by a slow speed drill, mix for five minutes until homogenous.
- b. Allow to stand for five minutes then re-mix.
- c. The render may stiffen on standing. Re-mix the product to regain a workable consistency, but do not add more water.

I. **Speciality finishes**

1. **Brick Effect (Mortar coat and Face coat)**

- a. Carefully measure 5.0 to 6.0 litres of water into a plastic bucket for one 25 kg bag. Slowly add the powder and using a Dryvit recommended mixing paddle, powered by a slow speed drill, mix for five minutes until homogenous.
- b. Allow to stand for five minutes then re-mix prior to application.
- c. The render may stiffen on standing. Re-mix the product to regain a workable consistency, but do not add more water.

2. **Drytex WOOD Effect System**

- a. Carefully measure 6.5 litres of water into a plastic bucket for one 25 kg bag. Slowly add powder and using a Dryvit recommended mixing paddle, powered by a slow speed drill, mix for five minutes until homogenous.
- b. Allow to stand for five minutes then re-mix.
- c. The render may stiffen on standing. Re-mix the product to regain a workable consistency, but do not add more water.

3. **Ameristone, TerraNeo, Stone Mist, Stone Mist T, Limestone and Weatherlastic Adobe**

- d. Immediately before application, mix for one minute to ensure a uniform consistency using a Dryvit recommended mixing paddle powered by a slow speed drill. Do not overmix.

4. **Tuscan Glaze, WOOD Glaze and WOOD Glaze Matt**

- a. Immediately before application, mix Tuscan Glaze, WOOD Glaze and WOOD Glaze Matt with a Dryvit recommended mixing paddle powered by a slow speed drill to a homogeneous consistency.
- b. Continuously agitate the products throughout application to ensure good colour consistency.
- c. As an alternate, boxing of buckets is acceptable.

5. **Skimit (used with Reflectit)**

- a. Open the pail of Skimit and mix for approximately one minute using a Dryvit recommended slow speed drill and paddle.
- b. Small additions of water, up to 120 ml per pail, may be added as determined by temperature and applicator preference.

6. **Reflectit**

- a. Immediately before application, mix for one minute to ensure a uniform consistency using a Dryvit recommended mixing paddle powered by a slow speed drill. Do not overmix.

7. **Custom Brick**

- a. The mixing will depend on the basecoat or finishes selected, refer to the technical data sheet for full information.

J. Coatings and sealers

1. **Demandit Smooth, Demandit Sanded, HDP Water-Repellent Paint (HyDroPhobic), Silstar and Weatherlastic Smooth**

- a. Immediately before application, mix for one minute to ensure a uniform consistency using a Dryvit recommended mixing paddle powered by a slow speed drill. Do not overmix.

2. **Colorsil and SealClear**

- a. Stir the material thoroughly before use.
- b. Continuously agitate the products throughout application to ensure good colour consistency.
- c. As an alternate, boxing of buckets is acceptable.

IV. Preparation of openings, joint bridging and sheathing board jointing

A. Preparation of openings.

1. General

- a. Consideration must be given as to whether the Outsulation system is being installed with existing or new windows in either a set back or set forward position. Please refer to Dryvit Outsulation standard details for further guidance.

2. Preparation of rough openings (where specified)

- a. Cill pan flashing (Exposed)
 - i. Install a seamless pan flashing at all cill locations.
 - ii. The flashing shall extend between the framing members of the rough opening and shall be sized to protect the cill, sheathing and the surface of the Outsulation System. It must include vertical legs at the back and sides to ensure weather protection.
 - iii. All flashing shall be continuous, have watertight seams, and shall be configured to shed all water to the exterior of the system.
 - iv. The flashing shall extend a minimum of 65 mm over the surface of the Outsulation System.
- b. Cill pan flashing (Concealed) for use with nail-on-windows
 - i. Install a seamless pan flashing at all cill locations.
 - ii. The flashing shall extend between the framing members of the rough opening and shall be sized to protect the cill and sheathing. It must include vertical legs at the back and sides to ensure weather protection. It shall extend a minimum of 100 mm below the opening and have a sloped edge, which protects the top edge of the Outsulation System.
 - iii. All flashing shall be continuous, have watertight seams, and shall be configured to shed all water to the exterior of the system.
 - iv. Insulation board shall be mechanically fastened over the flashing and secured into each framing member.

B. Substrate expansion joint bridging

1. AquaFlash System

- a. Clean the joint to allow for the installation of the backer material. Install a closed cell polyethylene backer rod, sized a minimum of 50% larger than the joint width. Install so that the backer rod is recessed or projects a minimum of 6 mm from the wall surface.
- b. Using a brush or mini foam roller, apply a liberal coat of AquaFlash liquid material to the backer rod and adjacent substrate surface to the width of the AquaFlash Mesh.
- c. Immediately lay the AquaFlash Mesh into the wet material and brush smooth adding additional material to completely embed the mesh. The width of the AquaFlash Mesh must overlap each side of the joint by a minimum of 50 mm
- d. Allow material to set for 15 minutes, then apply a second liberal coat of AquaFlash liquid and smooth out to ensure a continuous film free of voids, pinholes, or other discontinuities.
- e. Refer to the AquaFlash application instructions for full details.

C. Sheathing board jointing (AquaFlash system or Backstop NT with Grid tape).

1. AquaFlash System

- a. Sheathing board gaps shall not exceed 6.5 mm and the surface must be flat within 6.5 mm in any 1.2 m radius.
- b. The width of the AquaFlash Mesh must overlap each side of the board joint by a minimum of 50 mm.
- c. Using a brush or mini roller, apply a liberal coat of AquaFlash liquid material to either side of the board joint adjacent surface to the width of the AquaFlash Mesh.
- d. Immediately lay the AquaFlash Mesh into the wet material and brush smooth adding additional material to completely embed the mesh.
- e. Allow material to set for 15 minutes then, apply a second liberal coat of AquaFlash liquid and smooth out to ensure a continuous film free of voids, pinholes, or other discontinuities.
- f. Refer to the AquaFlash application instructions for full details.

2. Backstop NT Texture and Grid Tape

- a. Sheathing board gaps shall not exceed 6.5 mm and the surface must be flat within 6.5 mm in any 1.2 m radius.
- b. Apply Grid Tape to overlap each side of the board joint and press firmly on to the substrate.
- c. Using a trowel or mini roller to apply a coat of Backstop NT Texture over the Grid Tape.
- d. Allow the material to set for a minimum of one hours or until dry to the touch.
- e. If required, apply a second coat to ensure a continuous film free of voids, pinholes, or other discontinuities.
- f. Refer to the Backstop NT Texture application instructions for full details.

D Air and moisture barrier

1. General

The Outsulation System shall not be directly adhesively fixed over a conventional breather or vapour control membrane. When an air or moisture barrier is required the sheathing is coated with Backstop NT Smooth or Backstop NT Texture.

2. Backstop NT Smooth and Backstop NT Texture

- a. All sheathing board joints shall be sealed in accordance with Section [IV.C.1 or 2](#).
- b. Prior to application, all fastener heads shall be spot covered, using a trowel, with Backstop NT Texture and left to set for two hours.
- c. Using a trowel, apply a coat of Backstop NT Texture or alternatively using a mini roller apply a liberal coat of Backstop NT Smooth, over the entire surface of the sheathing, including the pre-treated joints.
- d. Allow the material to set for a minimum of one hours or until dry to the touch.
- e. When using Backstop NT Smooth, dependant on the substrate, a second roller applied coat may be required.
- f. Check to ensure a continuous film free of voids, pinholes, or other discontinuities is achieved and recoat any imperfections as required.
- g. Leave to fully dry for a minimum of six hours prior to adhesively fixing insulation panels.

V. Insulation board installation - Adhesive and mechanical fix

A. System terminations

- a. Attach Detail mesh around the perimeter of all openings, penetrations, expansion joints and other system terminations by applying a ribbon of adhesive mixture on the substrate and embedding the Detail mesh into the wet mixture.
- b. Position the Detail mesh so that a minimum of 65 mm is left to extend onto the insulation board. Keep the mesh, which is not embedded, clean.
- c. Ensure the mesh is of sufficient width to wrap around the thickness of the board and create a minimum 65 mm overlap with the main mesh. If the width of the mesh required exceeds the width of the Detail mesh, Standard Plus 150 mesh can be cut to the required dimensions.
- d. Where an EPDM is present around opens it is still important to backwrap the insulation using the Detail mesh so it is adhesively fixed back to the substrate. As the adhesive and mesh will not form a suitable bond to the membrane, it is extended over and past the EPDM by 50 mm before being adhesively fixed back to the substrate.

B. Inspection of the insulation board

- a. Prior to installing the insulation board, it shall be checked to ensure that it is Dryvit Square Edge EPS (White) or Dryvit Square Edge LL EPS (Grey) insulation conforming to EN 13163, Euroclass E, fire retardant grade, typical dimensions 1.2 m x 0.6 m by the specified thickness and was obtained from Dryvit UK Ltd.
- b. Any insulation board not meeting the above requirements should be rejected and not installed.

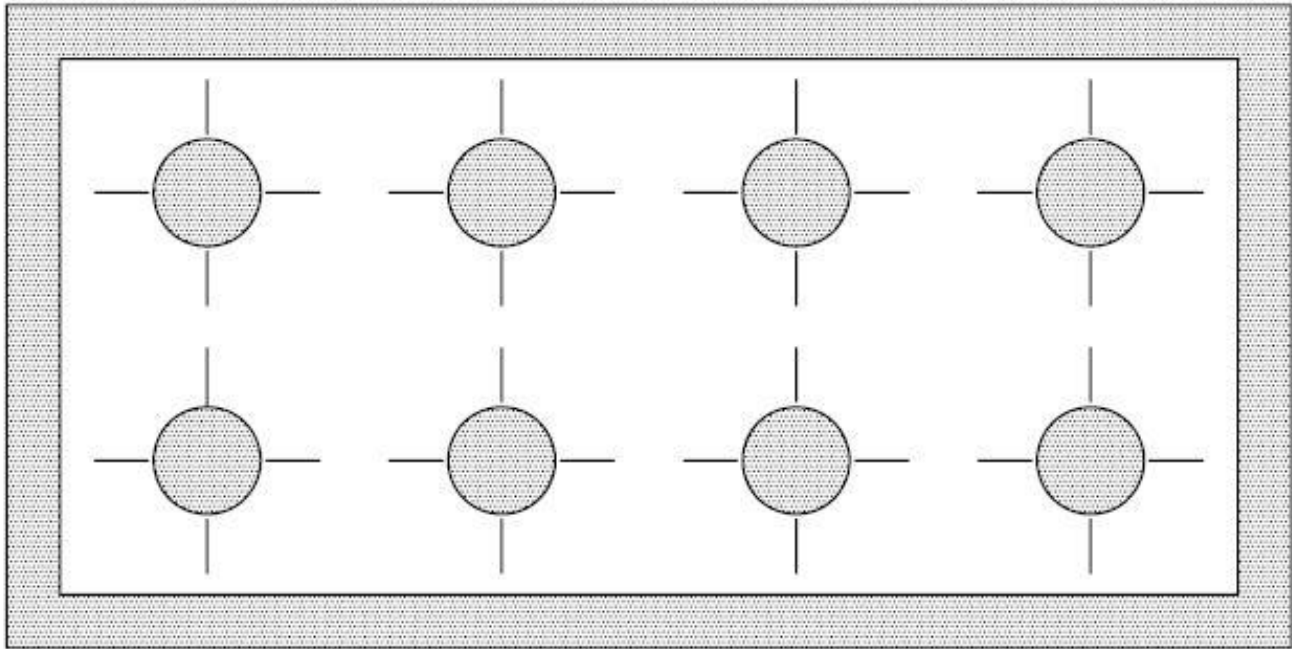
C. Methods of applying Dryvit cementitious adhesives

1. Notched trowel or ribbon and dab method (consult table below)

- a. Installations over sheathing board substrates shall use the notched trowel method.
- b. The ribbon and dab method of applying the adhesive mixture shall not be used with ADEPS or PU010 foam.
- c. The adhesive must be applied to the board, do not install adhesive mixture on the substrate.

Substrate out-of-plane tolerance in 3 metres	Substrate type	Fixing method
0 mm to ± 3 mm (Total 6 mm)	Solid only	Using a stainless-steel trowel, install a ribbon of the adhesive mixture 50 mm wide by 10 mm thick around the entire perimeter of the insulation board. Place eight dabs of the adhesive mixture 10 mm thick by 100 mm in diameter, at approximately 200 mm centres, to the interior area of the insulation board to achieve a minimum 40% contact area when the board is pressed back to the substrate. See Figure 1 .
	Solid or sheathing board	Use a notched trowel, with 10 mm wide and 13 mm deep notches spaced at 45 mm centres. Apply the adhesive mixture to the reverse side of the insulation board. Holding the trowel at a 45° angle, apply firm pressure to the insulation board to scrape the excess adhesive from between the adhesive beads and create a minimum 40% contact area on solid substrates and 50% on sheathing boards when the board is pressed back to the substrate. See Figure 2 . The adhesive shall be applied so that the ribbons run vertically when the insulation board is placed on the wall.
± 3 mm to ± 6 mm (Total 6 mm to 12 mm)	Solid or sheathing board	Using a stainless-steel trowel, install a ribbon of the adhesive mixture 50 mm wide by 20 mm thick around the entire perimeter of the insulation board. Place eight dabs of the adhesive mixture 20 mm thick by 100 mm in diameter, at approximately 200 mm centres, to the interior area of the insulation board to achieve a minimum 40% contact area on solid substrates and 50% on sheathing boards when the board is pressed back to the substrate.
$> \pm 6$ mm	Solid only	Re-profile the substrate flat with Stucco Build, refer to the product data sheet for further information, then follow the appropriate fixing method as specified in this table.

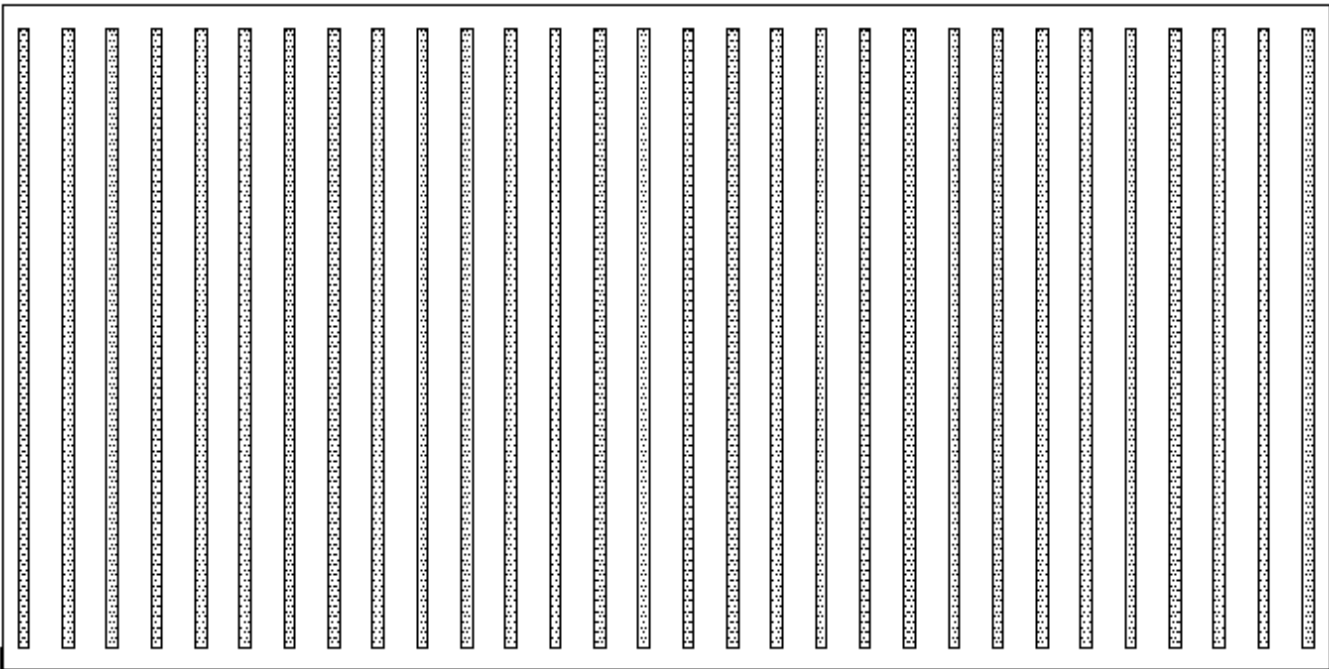
RIBBON & DAB



PERIMETER RIBBON APPROX. 50MM WIDE X 10MM THICK.
8No. DABS 100MM DIA. 10MM THICK AT APPROX. 200MM ON CENTRE

Figure 1: Ribbon and dab application pattern

NOTCHED TROWEL - GENERALLY SHEATHED SUBSTRATES



10MM WIDE NOTCHES 13MM DEEP SPACED @ 45MM CENTRES (VERTICAL)

Figure 2: Notched trowel application pattern

D. Dryvit starter track (where specified)

1. Dryvit Starter Track shall be installed above the DPC at the base of the wall. Alternatively, where a Dryvit Starter Track is not specified, the base of the system may be backwrapped as a standard system termination as described in Section [V.A.](#)
2. Using a laser level or chalk line, strike a level line at the base of the wall that coincides with either the top or bottom of the upstand leg.
3. Position the track on the line and press firmly against the substrate. Secure the track using corrosion resistant fasteners at approximate 300 mm centres attached into the underlying substrate or framing members.
4. Fix to suit the substrate type and loading requirements.
5. Do not overlap tracks, they shall be butted tightly and jointing clips used to maintain continuity of the track.
6. A continuous front drip section at corners can be achieved by cutting the rear upstand leg and base of the track to facilitate bending to the required angle.
7. Using a brush or mini roller apply a continuous band of AquaFlash liquid a minimum of 50 mm above and overlapping onto the track. Immediately lay AquaFlash Mesh into the wet material and brush smooth adding additional material to completely embed the mesh.
8. Allow material to set for 15 minutes then apply a second liberal coat of AquaFlash liquid and smooth out to ensure a continuous film free of voids, pinholes, or other discontinuities to provide a seal. Refer to AquaFlash application instructions for further application details.

E. Insulation board installation

1. **Primary cementitious adhesive fix (with supplementary fixings when required)**
 - a. Surfaces should be clean, and free from loose material. The flatness of the surfaces must be checked and this may be achieved by using a straight edge spanning the storey height. Excessive irregularities i.e. greater than 10 mm must be made good prior to installation to ensure that the insulation boards are installed onto a smooth in-plane finished surface.
 - b. If necessary, remove organic growth and brush apply one application of Dryvit Borocal-5Rh fungicidal wash to the entire substrate surface and allow to fully dry.
 - c. It is recommended that rough masonry surfaces are re-profiled with a levelling mortar such as Dryvit Stucco Build prior to board installation, for localised areas the cementitious adhesive may be applied more generously to correct front face alignment.
 - d. When sheathing is used as a substrate, use a 300 mm by 1.2 m piece of insulation board as a starter row at the base of the wall. This will help minimise the insulation board joints from coinciding with the sheathing joints. Offset the insulation board joints from the sheathing joints a minimum of 200 mm in both vertical and horizontal directions. Install the insulation boards with their long edges oriented horizontally.
 - e. Ensure backwrap mesh has been installed at all terminations as described in Section [V.A.](#)
 - f. To begin, secure the Dryvit Starter Track or backwrap the insulation at the base of the wall as described in Section [V.D.](#)
 - g. Apply the adhesive mixture on the reverse of the insulation board and position the board horizontally on the substrate. Press the board gently to the substrate and into position. Apply firm pressure over the entire surface of the insulation board to ensure uniform contact and high initial grab.
 - h. Using a margin trowel, clean the insulation board edges of any adhesive mixture. Ensure that the insulation board joints are butted tightly and are level and flush.
 - i. Do not allow adhesive to remain in board joints since material in board joints can result in cracking.
 - j. Install subsequent rows of insulation board in a running bond pattern (vertical joints staggered). Installation in this manner will reduce the potential for cracks to develop.

- k. With factory edges exposed, stagger vertical joints at inside and outside corners. Installation in this manner will reduce the potential for cracks to develop. Make sure the corners are straight and plumb.
- l. To ensure an overall flat surface, tamp the entire wall with a board that overlaps two to four rows of insulation.
- l. If for any reason the insulation board joints are not butted tightly, the gaps must be filled.
- m. All gaps greater than 1.5 mm up to 7 mm are filled with Dryvit FF197 expanding polyurethane foam. The foam is injected into the gap and should penetrate as far back to the substrate as possible and not less than one half the thickness of the EPS. After it cures, the excess should be sliced off using a knife or trowel edge prior to rasping. Any material that may come loose during the rasping process must be reapplied and this step repeated.
- n. Gaps greater than 7 mm are filled with a cut sliver of EPS. To create a tight-fitting sliver, it is recommended that a wider joint be cut with a hot-groove or similar tool. Do not install adhesive on sliver edges.
- o. Allowing this method of filling gaps between the insulation boards is not intended to take the place of good workmanship and care must be taken to ensure that all EPS boards are abutted as tightly as possible during installation.
- p. Once the insulation boards are in place, wait a minimum of 24 hours prior to working on the surface of the insulation boards to prevent any movement which may weaken the bond of the adhesive mixture to the substrate.
- m. The entire wall must be rasped flat to remove any irregularities in the insulation board surface. Use a Dryvit hand help rasp, alternatively electric and air rasps are available. Rasping is accomplished with a light circular motion over the surface of the boards. A fine particle dust respirator must be worn to protect against inhaling EPS particles or dust.
- n. Do not rasp parallel to the board joints.
- o. Mechanical fixings may be used to protect boards from strong wind while the adhesive sets. Where required, they should be installed through each board (normally one fixing through the board centre) to secure them until the adhesive has developed sufficient bond strength, normally 24 to 48 hours.
- p. After 24 to 48 hours the fixing may either be removed and the hole filled with Dryvit PU010 Adhesive Foam or alternatively the fixing may be left in place. Small holes may be filled with Dryvit FF197 expanding foam.

2. Primary PU adhesive fix

- a. Refer to Section [V.E.1](#).a. to f. for preparation details.
- b. Keep the canister in a vertical position and with the valve downwards apply a bead of foam around the perimeter of the EPS board then across the full width of the board at 300 mm intervals.
- c. Before the foam collapses, move the EPS board into place and press firmly to ensure good contact with the substrate. If necessary hold in position for two to three minutes while the adhesive sets.
- d. Refer to the PU010 product data sheet for further application details.

3. Primary mechanical fix with supplementary adhesive fix (mechanical fixings below the mesh)

This method of fixing may be specified or required when installing into coated/rendered substrates. The supplementary adhesive will assist to maintain a level board surface on uneven substrates.

- a. Refer to Section [V.E.1](#).a. to f. for preparation details.
- b. A series of tests should be carried out to determine the resistance to pull-out of the proposed fixings. Refer to Dryvit DIS 102 and DIS 105 for further detail and requirements.
- c. Apply the supplementary adhesive and install the insulation boards as described in Section [V.E.1](#).
- d. The fixings are installed by leaving the insulation board in place for a minimum of 24 hours. This will prevent any movement which may weaken the bond of the adhesive mixture to the substrate. Using this method, the entire wall shall be rasped flat to remove any irregularities prior to installing the fixings.
- e. Into each full insulation board install five mechanical fixings, one in each corner and one centrally in a pattern as shown in the Outsulation System Installation Details or given in project specific Dryvit layout drawings. The fixings should be installed a minimum of 120 mm from the edge of the board.
 - i. Sheathing board substrates - Insert the correct length plastic body of the fastener through the EPS such that the outer flange of the plate shaped head causes a slight deformation in the insulation and is flush with the board surface. Insert the appropriate self-drilling screw, of the correct embedment length for the stud work, into the fastener body and through the sheathing board. Do not overdrive the screw, the central face of the flange should sit flush to a maximum of 0.5 mm beneath the surface of the insulation board causing a slight dimple at each fastener location. When using a recessed fastener, insert an EPS plug and fix into the recess in accordance with the fixing supplier's installation instructions.
 - ii. Concrete and brick substrates - Use the correct diameter masonry bit and drill a hole through the insulation board into the substrate to the correct fastener embedment depth. Push the fixing body of the fastener through the hole and screw or hammer (as required) the fixing pin into place such that the outer flange of the plate shaped head causes a slight deformation in the insulation and is flush with the board surface. Do not overdrive the fastener, the face of the flange should sit flush to a maximum of 0.5 mm beneath the surface of the insulation board causing a slight dimple at each fastener location. When using a recessed fastener, insert an EPS plug and fix into the recess in accordance with the fixing supplier's installation instructions.
 - iii. If a fixing is overdriven and the local integrity of the insulating board lost, or the board is damaged or torn, a new fixing should be installed in the same proximity. The hole formed by the overdriven fixing should be plugged with a tight-fitting piece of insulating board fastened with Dryvit PU010 Adhesive Foam. Small holes may be filled with Dryvit FF197 expanding foam.
- f. Once installed, inspect the surface of the boards for flatness, using a minimum 2.4 m straight edge. Rasp the entire wall flat to remove any irregularities any high areas and out-of-plane board joints flat.
- g. With factory edges exposed, stagger vertical joints at inside and outside corners. Installation in this manner will reduce the potential for cracks to develop. Make sure the corners are straight and plumb.
- h. The base coat is applied to fully embed the reinforcing mesh and provide a uniform thickness of approximately 2 to 3 mm over the fastener heads.
- i. The recommended method is to apply the base coat in two passes as described in Section [VII.C.1](#).

4. Primary mechanical fix/supplementary adhesive fix (mechanical fixings through the mesh)

This method of fixing may be specified or required to meet high wind loads or when installing into coated/rendered substrates. The supplementary adhesive will assist to maintain a level board surface on uneven substrates.

- a. Refer to Section [V.E.1](#).a. to f. for preparation details.
- b. A series of tests should be carried out to determine the resistance to pull-out of the proposed fixings. Refer to Dryvit DIS 102 and DIS 105 for further detail and requirements.
- c. Apply the supplementary adhesive and install the the insulation boards as described in Section [V.E.1](#).
- d. Mechanical fixings below the mesh can be used to initially locate the EPS boards, refer to mechanical fixings below the mesh in Section [V.E.3](#).
- e. Mechanical fixings should be installed through the mesh at 600 mm centres (approximately 5.5 per m²) in a pattern as shown in the Outsulation System Details or at a fixing density as given in project specific Dryvit layout drawings.
- f. Apply the base coat mixture onto the face of the insulation board and embed the required reinforcing mesh into the wet base coat material, refer to Section [SVII](#).
 - i. Sheathing board substrates - Drill holes of the correct diameter through the mesh and a partial depth into the insulation board, but not into the sheathing board. Insert the correct length plastic body of the fastener through the mesh such that the outer flange of the plate shaped head causes a slight deformation in the surface of, and is flush with, the wet base coat surface. Insert the appropriate self-drilling screw, of the correct embedment length for the stud work, into the fastener body and through the sheathing board. Do not overdrive the screw, the central face of the flange should sit flush to a maximum of 0.5 mm beneath the surface of the base coat causing a slight dimple at each fastener location.
 - ii. Concrete and brick substrates - Use the correct diameter masonry bit and drill a hole through the mesh/insulation board into the substrate to the correct fastener embedment depth. Push the fixing body of the fastener through the hole and screw or hammer (as required) the fixing pin into place such that the outer flange of the plate shaped head causes a slight deformation in the mesh and is flush with the wet base coat surface. Do not overdrive the fastener, the face of the flange should sit flush to a maximum of 0.5 mm beneath the surface of the base coat causing a slight dimple at each fastener location.
- j. Centrally place a pre-cut 140 mm square of Detail mesh over each fixing head and neatly embed it in the surrounding basecoat mixture ensuring it is fully coated in basecoat. Using a small damp brush, smooth out irregularities and feather the edge of the base coat mixture. The objective is to fill the holes and pin recess in the plate shaped head of the faster and to ensure all mesh is fully coated in base coat to make it as unobtrusive as possible. Refer to Outsulation System Details (see [Figure 3c](#)).
- k. Allow the base coat to “take up” before application of the second base coat layer to achieve a total thickness of approximately 2 to 3 mm and maintain this thickness over the fixing heads.
- l. Allow sufficient time for the base coat to cure as detailed in the product data sheet.

5. Sole mechanical fix (Installing mechanical fixings without adhesive)

- a. Refer to Section [V.E.1](#).a. to f. for preparation details.
- b. A series of tests should be carried out to determine the resistance to pull-out of the proposed fixings. Refer to Dryvit DIS 102 and DIS 105 for further detail and requirements.
- c. Press the insulation board firmly to the substrate and hold it in position. Into each full insulation board install one mechanical fixing centrally followed by one in each corner of the board in the pattern as shown in the Outsulation System Installation Details or as stated in project specific Dryvit layout drawings. The fixings should be installed a minimum of 120 mm from the edge of the board.
 - i. Sheathing board substrates - Insert the correct length plastic body of the fastener through the EPS such that the outer flange of the plate shaped head causes a slight deformation in the insulation and is flush with the board surface. Insert the appropriate self-drilling screw, of the correct embedment length for the stud work, into the fastener body and through the sheathing board. Do not overdrive the screw, the central face of the flange should sit flush to a maximum of 0.5 mm beneath the surface of the insulation board causing a slight dimple at each fastener location. When using a recessed fastener, insert an EPS plug and fix into the recess in accordance with the fixing supplier's installation instructions.
 - ii. Concrete and brick substrates - Use the correct diameter masonry bit and drill a hole through the insulation board into the substrate to the correct fastener embedment depth. Push the fixing body of the fastener through the hole and screw or hammer (as required) the fixing pin into place such that the outer flange of the plate shaped head causes a slight deformation in the insulation and is flush with the board surface. Do not overdrive the fastener, the central face of the flange should sit flush to a maximum of 0.5 mm beneath the surface of the insulation board causing a slight dimple at each fastener location. When using a recessed fastener, insert an EPS plug and fix into the recess in accordance with the fixing supplier's installation instructions.
 - iii. If a fixing is overdriven and the local integrity of the insulating board lost, or the board is damaged or torn, a new fixing should be installed in the same proximity. The hole formed by the overdriven fixing should be plugged with a tight-fitting piece of insulating board fastened with Dryvit PU010 Adhesive Foam. Small holes may be filled with Dryvit FF197 expanding foam.
- d. Subsequent rows of insulation slabs are positioned in a running bond pattern, staggering the vertical joints. Ensure that the insulation board edges are butted tightly together. To minimise the need for excessive rasping, ensure all board faces are a tight butt fit, positioned flush with each other and alignment is checked as work proceeds.
- e. Once installed, inspect the surface of the boards for flatness, using a minimum 2.4 m straight edge. Rasp any high areas and out-of-plane board joints flat as described in Section [V.E.1](#).m. taking care not to damage fixing plates.
- f. With factory edges exposed, stagger vertical joints at inside and outside corners. Installation in this manner will reduce the potential for cracks to develop. Make sure the corners are straight and plumb.
- g. The base coat is applied to fully embed the reinforcing mesh and provide a uniform thickness of approximately 2 to 3 mm over the fastener heads.
- h. The recommended method is to apply the base coat in two passes as described in Section [VII.C.1.b](#).

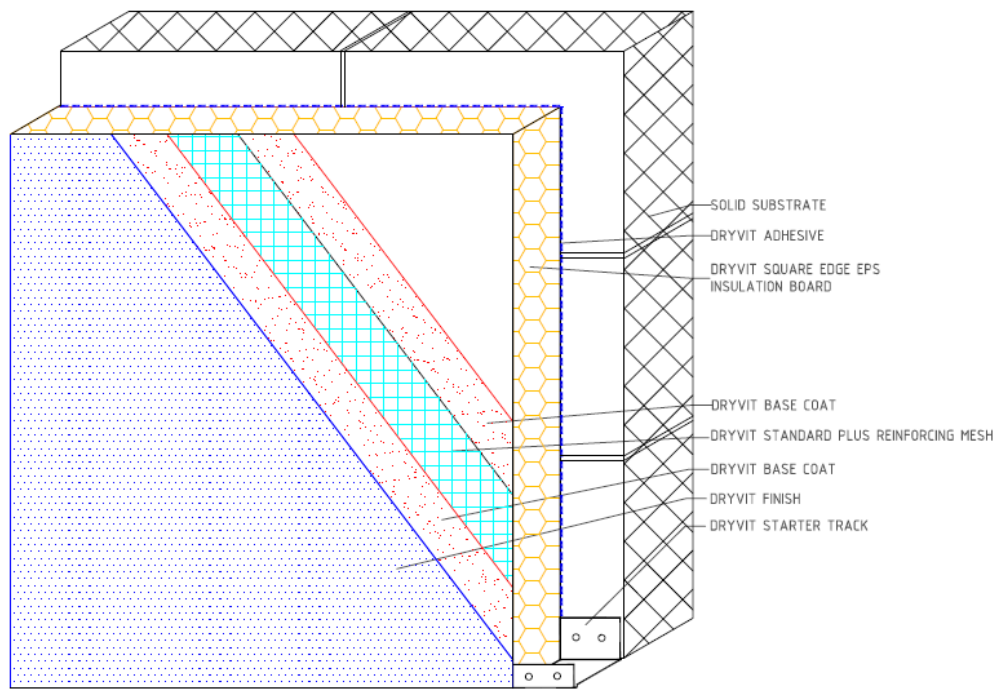


Figure 3a: Outsulation primary cementitious adhesive fix

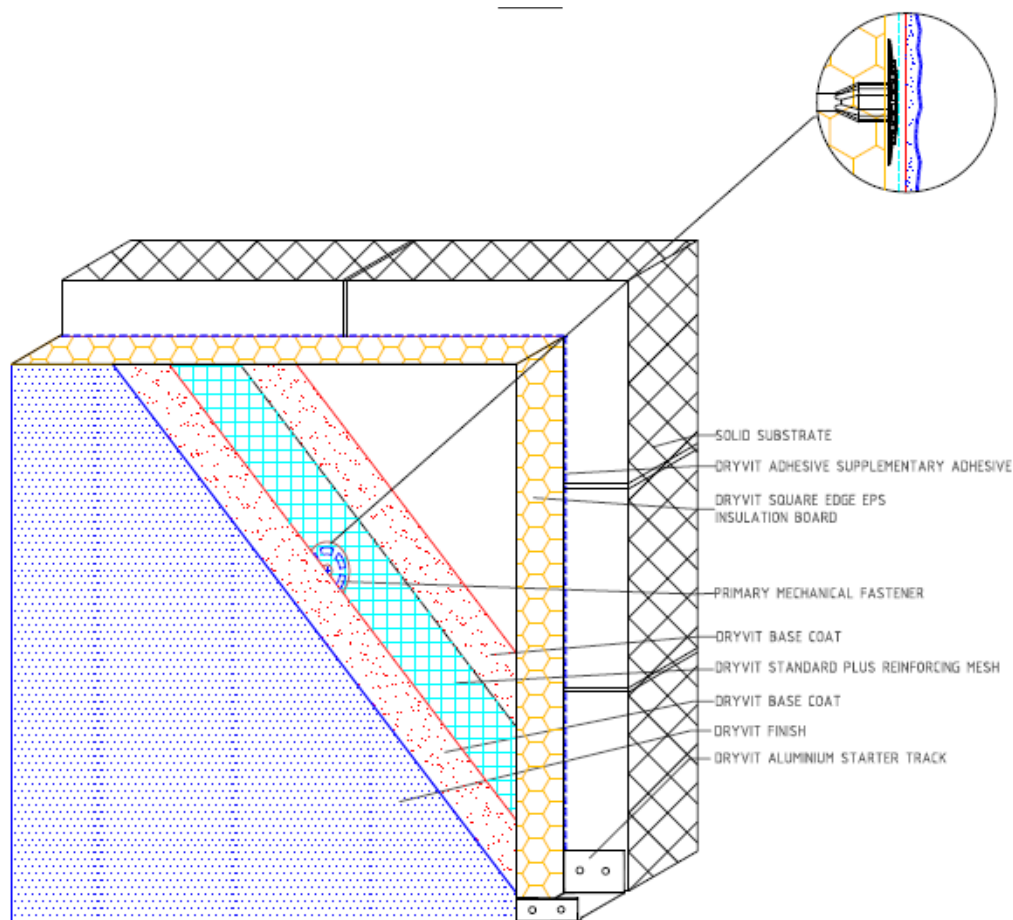


Figure 3b: Outsulation primary mechanical fix and supplementary adhesive with fixings below the mesh

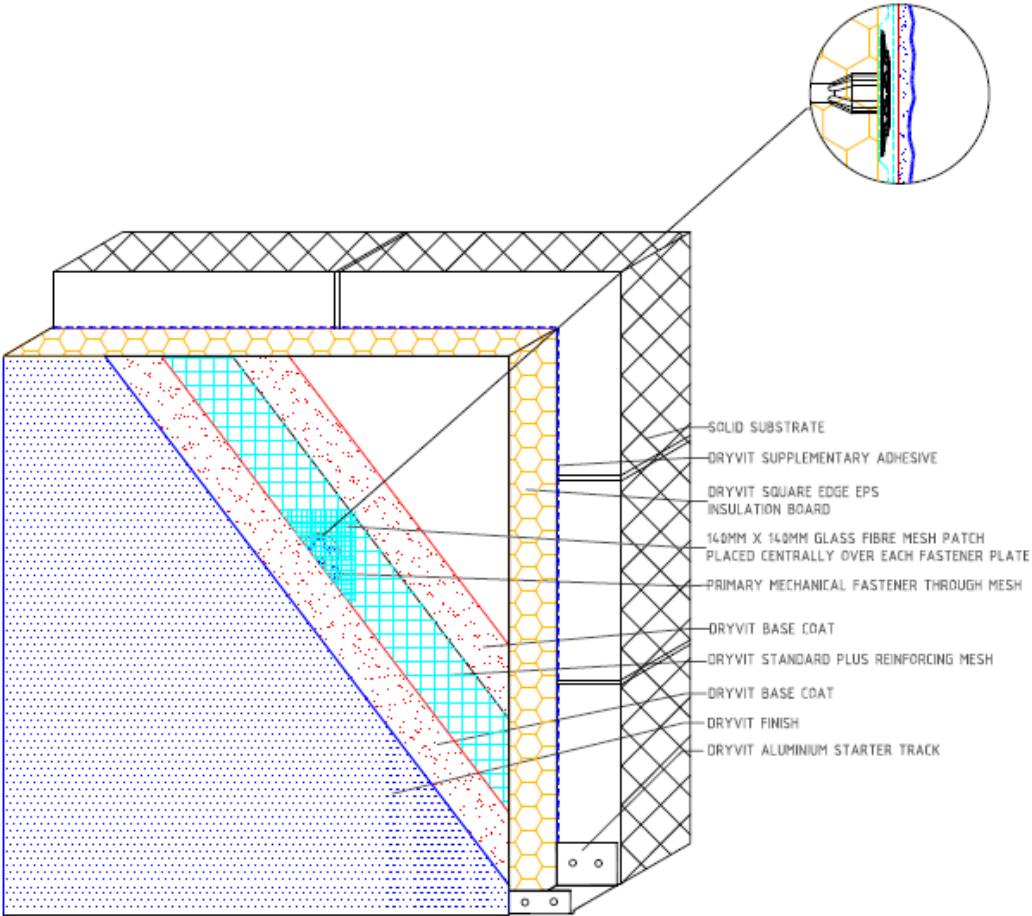


Figure 3c. Outsulation primary mechanical fix with supplementary adhesive with fixings through the mesh

VI. Fire barriers

A. Fire breaks

1. Position fire barriers in accordance with Dryvit's LPCB approval, BR 135 or to Local Authority Building Control Officer's requirements as indicated on design drawings.
2. Fire barriers must be constructed of mineral wool lamella that is non-combustible in accordance with BS 476-4 or meets the requirements for Euroclass A1 in accordance with EN 13501-1.
3. The mineral wool lamella is formed by cutting strips from the full length of a high density mineral wool slab. The barrier must be a minimum 100 mm high by total thickness of external wall insulation.
4. The fire barrier should form a continuous band through the insulation layer of EPS and eliminates the formation of any cavity.
5. The mineral wool is bonded to the substrate using Dryvit cementitious adhesive which must be fully "buttered" over the bonding lamella face before being pushed hard against the substrate to eliminate any cavity formation.
6. Once the fire break is in place, it is left for a minimum of 24 hours prior any work commencing on the surface of the insulation boards. This is to prevent any movement which may weaken the adhesive bond of insulation to the substrate.
7. The mineral wool section must be rasped flush with the surrounding EPS. Any gaps must be filled with foam or sliver of insulation to ensure there is no space between the insulation boards. The base coat must not be used to fill gaps between insulation board joints.
8. Dryvit Detail mesh should be applied over the barrier to lap the adjacent EPS on either side to a minimum of 50 mm in accordance with the standard detail.
9. To accommodate the overlap thickness, and the additional layer of mesh, the mineral wool and edges of the adjoining EPS boards are further rasped to form a small indent the same thickness of a single layer mesh. This ensures a flat surface finish once the basecoat and mesh layers are installed.

VII. Installation of reinforcing mesh and base coat

A. Reinforcing mesh

1. Dryvit Reinforcing mesh is available in the following widths and lengths:

Mesh type	Available sizes	
Standard Plus 150	1.2 m x 45.7 m	1.0 m x 50.0 m
Standard Plus 160	1.0 m x 50.0 m	
Standard Plus 200	1.2 m x 45.7 m	
Intermediate 370	1.2 m x 45.7 m	
Panzer 260	1.0 m x 50.0 m	
Panzer 500	1.2 m x 22.9 m	
Panzer 700	1.2 m x 22.9 m	
Detail	240 mm x 45.7 m	330 mm x 50 m
Corner	235 mm x 45.7 m	
Profile beads with mesh	Supplied in 2.5m lengths (quantity per pack may vary).	

2. Prior to installing the reinforcing mesh, it should be inspected to ensure that it is supplied by Dryvit UK Ltd (ie blue mesh with Dryvit logo, except for profile beads).

B. Insulation board inspection

1. Prior to installing the reinforced base coat, inspect the surface of the insulation board for:
 - a. Flatness, using a minimum 2.4 m straight edge. Rasp any high areas and out-of-plane board joints flat as described in Section [V.E.1](#).
 - b. Damage and foreign materials; correct deficiencies as necessary.
 - c. Surface degradation due to weathering or UV, visible as discolouration. If present rasp the affected areas to remove deterioration while maintaining the flatness of the surface.
 - d. Do not build up low areas with base coat mixture to form a flat surface.

C. Base coat and meshes

1. Standard Base Coat - Single layer of mesh

Standard Plus 150, Standard Plus 160, Standard Plus 200 or Intermediate 370 reinforcing meshes.

- a. Mix the required base coat mixture as described in Section [III.D](#) or [III.F](#)
- b. The base coat is applied such that the resulting overall minimum base coat thickness is sufficient to fully embed the reinforcing mesh. The recommended method is to apply the base coat in two passes.
- c. Do not apply the Dryvit materials in the rain.
- d. The insulation board surface must be dry prior to applying the base coat material.
- e. Using a stainless-steel trowel, apply the base coat mixture on the entire surface of the insulation board to an area slightly larger than the width and length of a piece of reinforcing mesh, in a uniform thickness of 1.5 mm. The reinforcing mesh may be installed either vertically or horizontally.
- f. Immediately place the reinforcing mesh against the wet base coat mixture. With the curve of the mesh against the wall, trowel from the centre to the edges avoiding wrinkles, until the mesh is fully embedded and no longer visible. Trowel smooth to a uniform thickness slightly more than the thickness of the reinforcing mesh, approximately 1.5 mm. The reinforcing mesh shall be continuous at corners and the mesh edges lapped not less than 100 mm. Do not lap the reinforcing mesh within 200 mm of a corner. Corners and edges normally require light strokes with a small damp brush to smooth out any irregularities.
- g. Allow the base coat mixture to take up, typically one to four hours dependent on ambient conditions.
- h. Apply a further 0.5 to 1.5 mm layer of base coat over the first coat to fully cover the reinforcing mesh (see [Figure 3a](#)). The result should be such that the reinforcing mesh is approximately centred within the base coat thickness. Do not allow the first pass to completely dry prior to the application of the second pass otherwise an excessive amount of base coat mixture will be necessary to fully coat the surface.
- i. Protect completed work from rain, water penetration and run-off.
- j. Allow the base coat to cure a minimum of 24 hours before proceeding with the application of finish coat. Cold or damp conditions may require extended drying times.
- k. Do not apply primer or finish to a wet or damp base coat.

2. **Base coat – Dual layer consisting Panzer Mesh plus a Standard Mesh**

Panzer 260, Panzer 500, Panzer 700 used in combination with Standard Plus 150, Standard Plus 160 or Standard Plus 200 reinforcing mesh.

- a. Panzer high impact meshes are generally only installed to a two-metre height at the base of the system, or in certain localised areas where high impact conditions are expected.
- b. Mix the required base coat mixture as described in Section [III.D](#) and [III.F](#).
- c. The base coat shall be applied such that the resulting overall minimum base coat thickness is sufficient to fully embed the reinforcing mesh. The recommended method is to apply the base coat in two passes.
- d. Using a stainless-steel trowel, apply the base coat mixture on the entire surface of the insulation board to an area slightly larger than the width and length of a piece of reinforcing mesh, in a uniform thickness of approximately 3 mm.
- e. Immediately place the Panzer mesh against the wet base coat mixture. With the curve of the mesh against the wall, trowel from the centre to the edges avoiding wrinkles until the mesh is fully covered and not visible.
- f. Continue in the same manner until the entire area requiring Panzer mesh is covered.
- g. Adjacent pieces must be tightly butted, do not overlap the Panzer mesh.
- h. Protect completed work from rain, water penetration and run-off.
- i. Allow the base coat to cure a minimum of 24 hours prior to applying Dryvit Standard Plus reinforcing mesh.
- j. Apply the Standard Plus mesh over the cured base coat in accordance with Section VII.C.1. Offset the edges of the Standard Plus reinforcing mesh from the edges of the Panzer mesh a minimum of 200 mm.
- k. If Panzer Mesh is installed horizontally, it is recommended the Standard Plus mesh be installed vertically and vice versa.

3. **Installation of Dryflex base coat for high exposure areas such as sloped surfaces, window cills, below grade etc.**

- a. Mix the Dryflex material as described in Section [III.F.1](#).
- b. The insulation board surface must be dry prior to applying the base coat material. The recommended method is to apply the base coat in two passes.
- c. Do not apply the Dryvit materials in the rain.
- d. Using a stainless-steel trowel, apply the Dryflex mixture on the surface of the insulation board in a uniform thickness of approximately 1.5 mm. Apply the Dryflex continuously over the sloped surface and continue for a minimum of 150 mm onto the vertical areas.
- e. Immediately place the reinforcing mesh against the wet Dryflex mixture. With the curve of the mesh against the wall, trowel from the centre to the edges, avoiding wrinkles, until the mesh is fully covered and not visible. The overall minimum base coat thickness shall be sufficient to fully embed the reinforcing mesh, approximately 1.5 mm.
- f. The reinforcing mesh can be continued across the transition from Dryflex base coat to a standard Dryvit base coat.
- g. Allow the Dryflex mixture to take up, typically one to four hours dependent on ambient conditions and base coat used. Then apply a further 0.5 to 1.5 mm layer of Dryflex over the first coat to fully cover the reinforcing mesh. The result should be such that the reinforcing mesh is approximately centred within the base coat thickness. Do not allow the first pass to completely dry prior to the second pass application or an excessive amount of base coat mixture will be necessary to fully coat the surface.
- h. Protect completed work from rain, water penetration and run-off.

- i. Allow the base coat to cure for a minimum of 24 hours before proceeding with the application of finish coat. Cool, damp conditions may require longer drying times.
- j. Do not apply primer or finish to a wet or damp base coat

VIII. Penetrations, expansion joints and aesthetic reveals

A. Windows, doors, mechanical equipment and all wall penetrations

1. At penetrations, align the insulation boards so that the edges (vertical and horizontal joints) do not coincide with the corners of the opening. This will reduce stresses on the base coat and minimise the potential for cracking, refer to Dryvit Outsulation System Installation Details.
2. Detail mesh shall be attached around the perimeter of the opening as illustrated in Figures [4a](#) and [4b](#) and as described in Section [V.A.](#)
3. Where an EPDM is present around openings it is still important to backwrap the insulation using the Detail mesh so it is adhesively fixed back to the substrate. As the adhesive and mesh will not form a suitable bond to the membrane, it is extended over and past the EPDM by 50 mm before being adhesively fixed back to the substrate.
4. The insulation board shall be held back from the window/door frame or mechanical equipment and a sealant joint installed to allow for differential movement as shown in the Dryvit Outsulation System Installation Details.
5. Corners of all openings such as windows, doors, mechanical equipment and all penetrations shall be reinforced with 330 mm x 300 mm section of Detail mesh placed diagonally to the opening as illustrated in Figures [4a](#) and [4b](#). This will reduce the potential for cracking at these high stress areas.

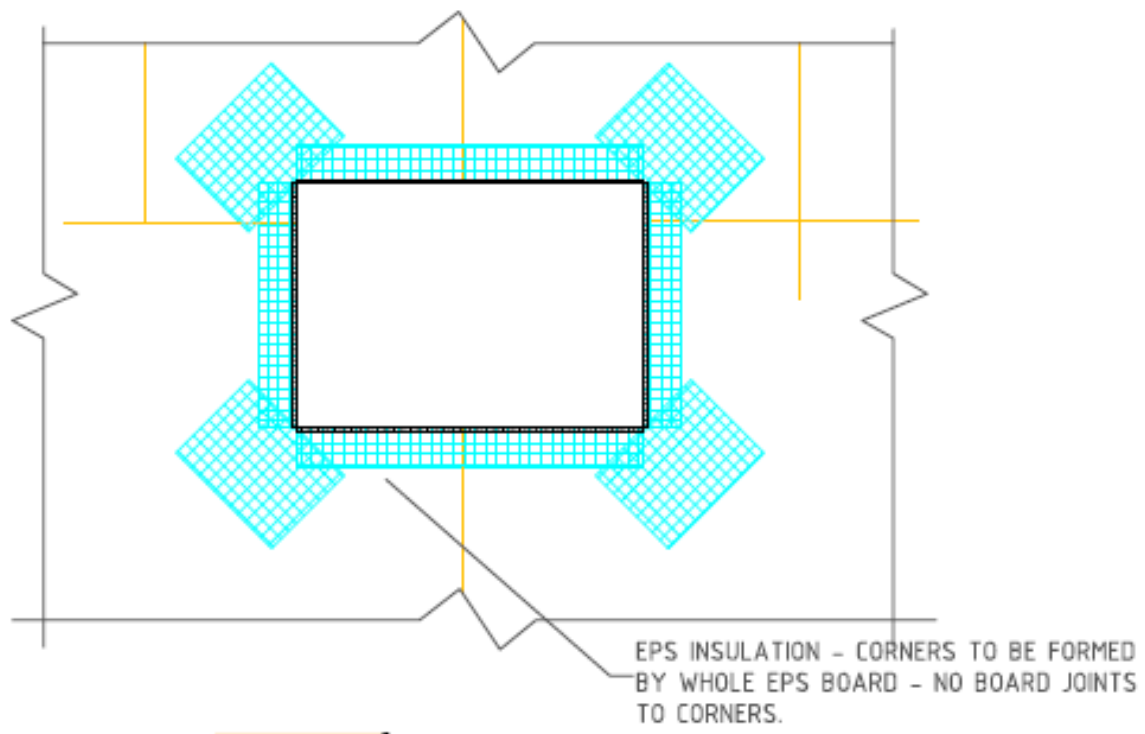


Figure 4a: Detailing of mesh around openings

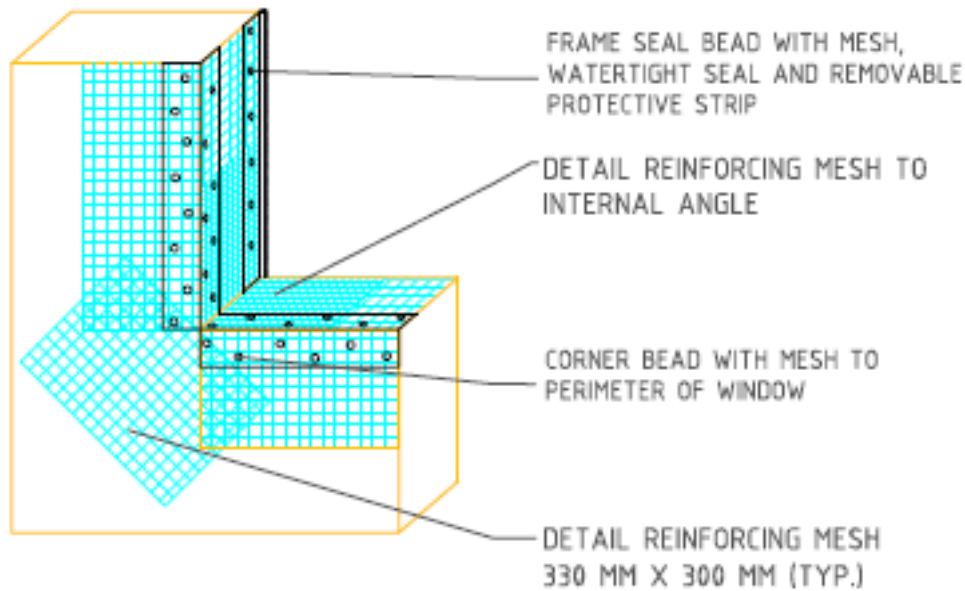


Figure 4b: Detailing of mesh around openings (shown with optional corner beads)

B. Expansion joints

1. Movement joints in the building structure should be extended through the system.
2. A vertical and horizontal movement joint must be incorporated a minimum of every 23 m.
3. When abutting dissimilar materials, the Detail Mesh is used to construct the required expansion joint. The Detail mesh shall be attached to the substrate as described in Section [V.A.](#) The insulation board is installed to leaving a minimum 20 mm separation to allow for the sealant joint to be installed.
4. When the Outsulation System is installed at a substrate transition, the Detail Mesh is used to construct the expansion joint. The Detail mesh shall be attached to the substrate as described in Section [V.A.](#)
5. All Detail mesh that was previously installed for backwrapping the insulation board shall be embedded in the base material mixture at this time.
6. With a stainless-steel trowel, apply the Genesis, Genesis DM Plus, NCB or Dryflex base material mixture to the edge and face of the insulation board and embed the Detail mesh in the wet mixture.

C. Outside corners (beads)

1. Ensure the insulation boards at the corner form a straight edge so the angle of the bead sits snugly onto the insulation. Apply base coat to the corner sufficient to fully embed the mesh wings. The Dryvit Corner Bead with Mesh is pushed tight onto the corner and the mesh fully embedded by trowelling base coat smoothly over the surface. The main reinforcing mesh is applied over the bead mesh a minimum of 65 mm. The mesh should not overlap onto the PVC angle.

D. Differing materials

1. At a transition between dissimilar materials, such as between Dryvit Brick Effect and Dash Receiver or at the base of the system, a horizontal Bellcast drip bead should be installed to provide managed water run-off. Cut the Dryvit Bellcast Drip Bead to length, apply adhesive to the substrate and embed the bead upstand, if necessary supplement with mechanical fixings e.g. “fir tree” fixing. For vertical transitions, a Dryvit Stop Bead is installed in the same manner as described for horizontal transitions.

E. Aesthetic reveals

1. To install an aesthetic reveal, snap a straight line using a chalk line to mark the position.
2. Position a straight edge such as a steel stud or track against the insulation board in the selected location to guide the appropriate cutting tool (router, hot knife, or hot-groove tool).
3. The thickness of the insulation board in the bottom of the joint must not be less than 20 mm. Thicknesses equal to or greater than 20 mm minimise crack development at the base of the joint.
4. The reinforcing mesh must be continuous through aesthetic joints. To ensure that the mesh is continuous, the reveals shall be meshed with Detail mesh. The Detail mesh must lap a minimum of 65 mm on each side of the reveal.
 - a. Apply the base coat material mixture in the reveal and on the adjacent insulation board surfaces.
 - b. Embed the Detail mesh on one side of the joint only.
 - c. Using a sled or special tool for the reveal, embed the Detail Mesh into the reveal being careful not to cut or damage the mesh.
 - d. If the mesh is cut in the reveal, a new piece of mesh must be installed over the cut to ensure a 65 mm overlap exists.
 - e. Embed the Detail mesh on the other side of the reveal. Ensure that the mesh is fully embedded and that all excess material is removed from the reveal.
 - f. Using a damp brush, clean out any irregularities in the base coat.
 - g. Where Corner Mesh is specified for additional impact resistance such as outside corners, the Corner Mesh should be embedded in the base coat mixture and allowed to set prior to installing the main reinforced base coat.

IX. Fixtures and fittings

A. General

1. Where there is a requirement to attach fixtures and fittings through the thermal insulation system, unlike conventional building substrates, External Wall Insulation systems do not offer the same strong anchorage by conventional installation methods.
2. Lightweight fixtures such as drain pipes, can be fixed directly into the Outsulation System, without introducing thermal bridging, using self-drilling plastic spiral anchors and stainless-steel screws. Refer to Dryvit Information Sheet DIS 22 for full installation details.
3. Heavier items that cantilever from the wall, such as satellite dishes or security cameras, can be fixed using a range of purpose designed plastic anchor point sleeves or other specialist fixing solutions. Contact Dryvit UK Ltd for further information.

X. Sealant joint preparation

A. All sealant joints shall be prepared with either Dryvit Demandit Smooth or Color Prime.

1. Stir Demandit Smooth or Color Prime to a smooth, homogeneous consistency.
2. Apply the appropriate primer with a brush on each side of the joint.
3. Allow the appropriate primer to dry for a minimum of 24 hours prior to sealing with recommended sealant as listed in Dryvit Guidance Note GN001.

XI. Dryvit primers

A. Base coat cure

1. Prior to applying the Dryvit primers, the base coat shall have cured for a minimum of 24 hours and shall be dry and hard. Cure time may be longer depending on environmental conditions.
2. Refer to the relevant Product Data Sheets for full application instructions or when applying over other materials.

B. Inspection and preparation

1. Inspect the base coat for any irregularities such as trowel marks, board lines, rough corners and edges, improper reinforcing mesh embedment as well as efflorescence.
2. Correct all irregularities and remove all efflorescence prior to applying the Dryvit primer.

C. Color Prime, Color Prime S and Prime Sil

1. Mix to a smooth homogeneous consistency in accordance with Section [III.G.1](#).
2. Apply with a brush, roller, or airless spray equipment in complete continuous strokes to achieve full substrate coverage. Refer to the respective Primer data sheet for complete instructions and coverage rates.
3. Approximate application thickness.

Primer	Approximate application thickness (µm)
Color Prime	100
Color Prime S	200 (max grain size)
Prime Sil	100

4. Drying times, prior to the application of the finish, will vary according to air temperature, relative humidity and porosity of substrate. Under average drying conditions of 20°C and 55% RH they are typically as follows:
 - a. Color Prime - Dry to the touch within 30 minutes and are sufficiently dry for application of finishes in two to three hours. Protect from rain for at least four hours.
 - b. Color Prime S - Dries to the touch within one hour and is sufficiently dry for application of finish in three to four hours. Protect from rain for at least four hours.
 - c. Prime Sil - Ready for application of finishes after complete drying of at least five hours.

D. Primax

1. Is applied directly to porous or painted substrate to improve the adhesive bond prior to the application of Stucco Build or the adhesive.
2. Mix to a smooth homogeneous consistency in accordance with Section [III.G.1](#).
3. Apply to the surface with a roller, or brush at an approximate thickness of 20 µm. Refer to Primax product data sheet for full application instructions and coverage rate.
4. Under average drying conditions of 20°C and 55% RH and dependent on substrate porosity Primax is touch dry within two hours.

XII. Dryvit finishes

A. Base coat cure

1. Prior to applying the Dryvit finish, the base coat shall have cured for a minimum of 24 hours and shall be dry and hard. Cure time may be longer depending on environmental conditions.

B. Primer drying

1. When Dryvit primers are used they should be dry before the application of the finish. Drying time will depend on both environmental conditions and permeability of the substrate, see section [XI.C.4](#) and [XI.D.3](#).

C. Inspection and preparation

1. Inspect the base coat for any irregularities such as trowel marks, board lines, rough corners and edges, proper reinforcing mesh embedment as well as efflorescence.
2. Correct all irregularities and remove any efflorescence prior to applying the selected Dryvit Finish.

D. Application

1. General

- a. All Dryvit finishes must be installed by trained applicators, refer to Section [XV](#).
- b. Apply continuously to a natural break such as corners, expansion joints or tape line maintaining a wet edge at all times.
- c. Whenever possible, order enough material in a single batch to complete the project to avoid potential colour variations from batch to batch.
- d. Sufficient personnel and scaffolding must be provided to continuously finish a distinct wall area, otherwise cold joints will result.
- e. Scaffolding must be spaced to maximum, as allowable by HSE legislation.
- f. On hot windy days, the wall may be fogged with clean potable water to cool the wall and facilitate finish installation. As with other plaster materials, installation work should precede the sun. For example, work the shady or cool side of the building. If this is not possible, scaffold should be shaded with a tarpaulin or nursery shade cloth.
- g. Do not introduce water to the finish material once it is installed on the wall as this will cause colour variations.
- h. Each applicator must use the same tool and hand motion and match the texture of the applicators above, below and on each side.
- i. Do not apply Dryvit materials in the rain.
- j. Do not apply textured Dryvit finish material in sealant joints. Refer to Section [X](#) for proper sealant joint preparation.

2. Standard finishes

- a. The following Dryvit finishes are acceptable for exterior use as part of the Outsulation System.

PMR: Quarzputz, Sandpebble 2, Sandpebble, Sandpebble Fine, Freestyle, Sandblast and Limestone.

FD PMR: Quarzputz, Sandpebble and Sandpebble Fine.

Weatherlastic: Quarzputz, Sandpebble, Sandpebble Fine.

HDP: Quarzputz, Sandpebble, Sandpebble Fine, Sandblast, Freestyle and Limestone.

TR: Quarzputz, Sandpebble 2, Sandpebble, Sandpebble Fine, Sandblast, Freestyle and Limestone.

SLK: Quarzputz, Sandpebble and Sandpebble Fine

Finish texture	Nominal aggregate size (mm)
Quarzputz	2.0
Sandpebble 2	2.0
Sandpebble	1.5 - 1.6
Sandpebble Fine	1.0 - 1.2
Sandblast	0.75 - 1.2
Freestyle	0.5 - 0.6
Limestone	0.5 - 0.6

- i. Mix the required Dryvit finish as described in Section [III.H.1-7](#). The base coat surface must be fully dry prior to applying the required primer (if used) and the primer dry before applying the Dryvit Finish material.
- ii. Using a clean stainless-steel trowel, apply a coat of the Dryvit finish in a uniform thickness on the dry base coat. The Dryvit Quarzputz and Sandpebble 2 finishes shall be applied and levelled to a uniform thickness no greater than the largest aggregate of 2 mm. The Sandblast finish is applied and levelled to a thickness of approximately 1.2 mm, one and half times the largest aggregate. The Sandpebble and Sandpebble Fine is applied and levelled to a uniform thickness no greater than the largest aggregate size of 1.5 mm and 1.0 mm respectively. Apply Freestyle slightly thicker than 1.5 mm, the texture being pulled out of this base layer or achieved by adding more to the base layer, but not exceeding 3.0 mm. Apply Limestone in two coats, the first a tight scrape coat that is left to stiffen prior to applying a second tight coat which is floated smooth.
- iii. The texture is achieved by a uniform hand motion and/or tool that produces the texture to match the approved sample.
- iv. Refer to the technical datasheet for full application information.

b. Dash receiver

- i. Mix the Dash Receiver as described in Section [III.H.9](#).
- ii. Apply a uniform layer of Dashing Receiver render to achieve a flat plane surface at approximately 6 to 10 mm thick.
- iii. While the render is still soft, throw washed dashing aggregate onto the surface at an approximate rate of 10 to 15 kg/m² to give a uniform coverage. If required, lightly tamp the aggregate into the Dash Receiver with a wooden float to ensure a good bond is obtained.

c. Drytex

- i. Mix the Drytex as described in Section [III.H.8](#).
- ii. Drytex render finish should be applied using a stainless-steel trowel to achieve a thickness slightly thicker than the largest aggregate size. Pull across the rough application coat using a horizontal trowel motion to develop a uniform thickness no greater than the largest aggregate of the material.
- iii. The textures are achieved by uniform hand motion and/or type of tool used e.g. plastic float to achieve a thickness slightly greater than the maximum aggregate size, Quarzputz 2 mm, Sandpebble 1.6 mm and Sandblast 1.2 mm.
- iv. Maintain a wet edge for uniformity of colour and texture.

3. Specialty finishes

a. Ameristone, TerraNeo, Stone Mist and Stone Mist T

- i. Mix respective finishes as described in Section [III.I.3](#).
- ii. Apply colour co-ordinated Color Prime to all substrates a minimum of four hours before application, longer at lower temperatures. The primer must be fully dry before applying Ameristone, TerraNeo, Stone Mist or Stone Mist T finish.
- iii. A small additional quantity of clean water up to 250 ml per pail may added to achieve the desired viscosity for spray applications, but should be consistent to all pails.
- iv. For TerraNeo, trowel apply a layer on to the primed base coat approximately 1.6 mm to 3.2 mm thick. Lightly float over the finish several times with a damp clean float, cleaning the float regularly. This product cannot be sprayed.

- v. For spray application of Ameristone, Stone Mist and Stone Mist T apply in two passes, one vertical and one horizontal to give a total thickness of between 1.6 and 3.2 mm. Alternatively, the first coat application of Stone Mist (not Ameristone or Stone Mist T) may be trowel applied in a tight coat free of lines and the second coat sprayed onto the wet trowel application.
- vi. In conditions of 20°C and 55% RH drying of all finishes will take 48 hours and will be extended at lower temperature.

b. Brick effect

- i. Mix the Brick Effect as described in Section [III.1.1](#).
- ii. Mortar coat – Apply at approximately 3 mm and level to achieve a flat plane surface, but take care not to over work the surface.
- iii. Face coat – After the Mortar coat has stiffened, but not set, apply the face coat at approximately 2 to 3 mm thickness and immediately lightly texture the Face coat with a soft bristle brush to create a brick surface effect. Leave to stiffen, but not set, for between 30 to 120 minutes dependent on drying conditions.
- iv. Once stiffened use a gauging tool to mark up the brick courses and with a long straight edge, spirit level and cutter carefully cut through the render to create the horizontal joints (generally a two-person job). Push the cutter back to the hardened base coat or host substrate to give a consistent mortar joint. Mark and cut out the vertical joints in a similar manner to complete the brick effect finish. Once all cuts have been made, lightly brush any excess material from the joints taking care not to mark the render surface.
- v. Experience and climatic conditions will dictate the best time for cutting of the face coat to form the joints, too soon and the cutter will rag and tear the render, too late and it becomes difficult or impossible to cut.

c. Drytex WOOD Effect System

- i. Mix the Drytex WOOD as described in Section [III.1.2](#).
- ii. Apply using a stainless-steel trowel to achieve an even thickness of about 5 mm. This can also be achieved by initially applying the Drytex WOOD slightly thicker than required with a notched trowel and finishing to a smooth surface with a steel trowel.
- iii. Leave it until dry to the touch, approximately 20 to 30 minutes dependent on temperature and relative humidity.
- iv. Select the desired flexible Drytex WOOD Imprint Mould and “release” the surface by brush applying a clean food grade cooking oil onto the imprint surface (Do not over apply or staining of the surface coating will occur).
- v. Starting at the highest point ensure the moulding is level and in the required orientation, gently press it onto the surface of the render in the desired location. Without allowing the mould to move use a 150 mm rubber roller to evenly press the moulding into the soft Drytex WOOD. Immediately remove the mould by carefully peeling it away from the render surface.
- vi. Repeat the sequence to create the full wood panel effect, releasing the imprint mould as necessary to ensure it does not stick to the render. After 24 hours, shallow grooves can be cut between the wood effect imprints using a hand held narrow bladed electric precision mini circular saw to emphasise the panel effect.

d. Weatherlastic Adobe

- i. Mix the Adobe finish material as described in Section [III.1.3](#).
- ii. Using a brush, roller or airless spray equipment, apply a coat of colour coordinated Color Prime at the recommended coverage to the cured base coat and allow to dry.
- iii. Using a stainless-steel trowel, apply a coat of Adobe approximately 1.6 mm thick to the wall surface.
- iv. Allow the Adobe finish to take-up.
- v. Using a stainless-steel trowel, apply a second coat of Adobe to obtain the desired texture.
- vi. An atomising spray bottle may be used to apply a mist of water to the surface in the finishing step.

e. Skimit (prior to applying Reflectit)

- i. Mix the Skimit as described in Section [III.1.5](#).
- ii. Using a stainless-steel trowel, apply a tight, thin coat of Skimit to the base coat free of trowel marks.
- iii. Allow the thin coat of Skimit to take up for 15 to 30 minutes and sand with a foam sanding block (i.e. fine or very fine). Remove all sanding dust with a damp cloth and thoroughly dry.
- iv. Apply a second coat in the same manner and allow it to dry for 10 to 20 minutes. Sand again, to achieve a very smooth, blemish free surface. The wall surface should then be checked closely for any slight imperfections and any blemishes touched up and sanded back before proceeding.

f. Reflectit

- i. Mix the Reflectit as described in Section [III.1.6](#).
- ii. Using a spray gun, roller or brush, newly applied finishes and Skimit should be left to dry for a minimum 24 hours under average conditions and be colour coordinated to the desired Reflectit.
- iii. Existing finishes shall be clean and can be colour coordinated with Dryvit Color Prime.
- iv. Spray application is the recommended method over Skimit and fine textured finishes, such as Sandpebble Fine or Adobe.
- v. The finish is applied at an approximate thickness of 100 µm per coat.
- vi. Approximate drying time will vary according to air temperature and relative. Under average drying conditions of 20°C and 55% RH Reflectit dries to the touch within 30 minutes and is dry to recoat in four to six hours.
- vii. Roller application should only be used over more highly textured finishes such as Sandpebble and coarser.
- viii. Roller application over Skimit is not recommended as this can result in visible roller and lap marks.
- ix. A short or medium pile woven fabric roller is recommended. Apply in two coats as required to achieve optimum performance in one continuous coat, maintaining a wet edge as application proceeds to a natural break. The roller must be kept fully loaded as the application proceeds, do not stretch out the application by rolling with a dry roller and the last levelling roller strokes should always be in the same direction to avoid directionality of the reflective pigments

- g. **WOOD Glaze and WOOD Glaze Matt**
 - i. Mix WOOD Glaze to a homogeneous consistency in accordance with Section [III.I.4.](#)
 - ii. Apply by brush in two thin even coats at a nominal thickness of 20 µm per coat allowing the first to dry before application of the second.
 - iii. Ensure that all the wood grain and any cut grooves are fully coated to achieve the desired colour and full level of protection.
- h. **Tuscan Glaze**
 - i. Mix Tuscan Glaze to a smooth homogenous consistency in accordance with Section [III.I.4.](#)
 - ii. Continuously agitate throughout application to ensure colour consistency.
 - iii. Tuscan Glaze is best applied on large areas using a low-pressure pump action sprayer or airless spray equipment. For smaller areas, Tuscan Glaze is best applied with a paint pad or, depending on the desired results, a roller, paint brush or sponge. Job site mock-ups are required and should represent the actual job site application techniques.
 - iv. Apply Tuscan Glaze evenly in light strokes. If sagging or running occurs, use a sponge or paint pad to correct immediately. Watch for brush or roller lines. If brush or roller lines appear, use a damp sponge, a paint pad or rag to make them disappear before the Tuscan Glaze starts to dry.
 - v. The wall may be blotted with a camelback sponge to achieve the desired mottled appearance.
 - vi. Check walls throughout the application to ensure that uniformity and the desired appearance is achieved.
 - vii. Drying time is approximately 24 hours at 20°C and 55% relative humidity, this will be extended at lower temperatures and/or higher humidity

XIII. Coatings and sealers (where specified)

Do not apply the Dryvit materials in the rain or spray in windy conditions.

1. **Finish cure**
 - a. Prior to applying the Dryvit Coatings, the finish must have cured for a minimum of 24 hours and shall be dry and hard.
 - b. Cure time may vary depending on environmental conditions.
 - c. All coatings and sealer must be protected work from rain for at least 24 hours
 - d. Refer to the relevant product data sheets for further application information and when applying over other materials.
2. **Demandit Smooth, Silstar and HDP Water-Repellent Paint (HyDroPhobic)**
 - a. Mix to a smooth homogeneous consistency in accordance with Section [III.J.1.](#)
 - b. Apply with a brush, short or medium pile woven fabric roller or airless spray equipment in complete continuous strokes to achieve a full coverage.
 - c. Nominal application thicknesses are given the table.

Coating	Nominal application thickness per coat (µm)
Demandit Smooth	100
Silstar	100
HDP Coating	100

- d. Approximate drying times will vary according to air temperature and relative humidity. Under average drying conditions of 20°C and 55% RH they are typically:
 - i. Demandit Smooth – Dries to the touch within 30 minutes and is ready to recoat in two hours.
 - ii. Silstar - Dries to the touch within two hours and ready to recoat after 12 hours.
 - iii. HDP Water Repellent Coating – Dries to the touch in 30 minutes ready to recoat in two hours.
- e. Apply in one continuous coat, maintaining a wet edge as the application proceeds to a natural break. The roller cover must be kept fully loaded as the application proceeds, do not stretch out the application by rolling with a dry roller. The last levelling roller strokes should always be in the same direction. Do not cut in around openings prior to overall application, but rather, do the cut-in work as the application proceeds.
- f. Do not allow coatings to dry on roller sleeves as they do not apply the coating evenly.
- g. Changing colour requires the application of a minimum of two coats dependent on colour.

3. Demandit Sanded

- a. Mix the Demandit Sanded to a smooth homogeneous consistency in accordance with Section [III.J.1](#).
- b. Apply the Demandit Sanded with a brush or short pile woven fabric roller in complete continuous strokes to achieve a full coverage at an approximate thickness of 150 to 200 µm per coat.
- c. Approximate drying time will vary according to air temperature and relative. Under average drying conditions of 20°C and 55% RH Demandit Sanded dries to the touch within 30 minutes and is dry to recoat in two hours.
- d. Roll or brush in multiple directions and lightly finish in one direction to ensure that no lap marks remain.
- e. A second coat may be required for heavy textured surfaces or when there is a contrast of colours. Apply the second coat as described above.
- f. Do not attempt to apply Demandit Sanded in one heavy coat. Two coats are always recommended. Only apply the second coat after the first coat is completely dry.
- g. Texture changes will exist after Demandit Sanded is applied over existing Dryvit finishes. The degree of change is a function of the thickness and the number of coats of Demandit Sanded.

4. Weatherlastic Smooth

- a. Mix the Weatherlastic Smooth to a smooth, homogeneous consistency in accordance with Section [III.J.1](#).
- b. Application is either by roller or airless spray.
- c. Apply a minimum 560 microns to achieve a 280 microns dry film thickness. This is achieved by applying the Weatherlastic Smooth in two coats. Under average drying conditions, 20°C and 50% RH, three hours drying time between coats should be adequate.
- d. Application by airless spray equipment or mastic pump and gun allows application of the coating at the total required application rate with a minimum of stippling or thickness variations.
- e. Equipment should have the capacity to pump 7.6 litres of coating per minute.
- f. Material hose should be minimum 12.5 mm inside diameter for spraying coating through more than a 15 m length. Minimum bursting of 3600 N (800 lbs) is recommended with an orifice size of 0.53 mm - 0.81 mm (0.021 in - 0.032 in), depending on equipment used.

- g. Cross apply coating by holding the spray gun perpendicular to, and approximately 0.6 m from the wall surface. Avoid excessive material build-up by holding spray gun away from the wall when pulling the trigger, then bringing gun across area to be coated. Maintain a wet edge and avoid starting and stopping in the middle of the wall. Do not attempt to overreach spray pattern as this may result in appearance of an irregular spray pattern.
- h. Place scaffolding and equipment to facilitate quick application without numerous interruptions.
- i. For roller application, a medium or long pile woven fabric roller is recommended.
- j. Completely saturate the roller cover and keep the roller loaded with coating to avoid foaming. Do not dry-roll or over-roll as this will cause excessive entrapment of air within the coating.
- k. A second coat is applied in a similar manner after the first coat has adequately dried.
- l. For cutting-in and trim, a nylon bristle brush is recommended.
- m. A 10% loss from overspray should be anticipated.
- n. Back rolling sprayed areas is recommended to control pin holing on spray applications over porous surfaces.

5. **Colorsil**

- a. Mix Colorsil to a smooth, homogeneous consistency in accordance with Section [III.J.2](#).
- b. Apply at least two coats using a roller, brush or spray at an approximate thickness of 100 µm per coat.
- c. Allow at least 12 hours between coats.
- d. Drying time is approximately 48 hours at 20°C and 55% relative humidity, this will be extended at lower temperatures and/or higher humidity.

6. **SealClear**

- a. Mix SealClear to a smooth, homogeneous consistency in accordance with Section [III.J.2](#).
- b. The preferred method of application is low pressure garden type spray, but a roller and brush can be used.
- c. Start at the top of the wall and used horizontal strokes to saturate the surface to the point of run off.
- d. SealClear is applied as a milky white liquid that shows the areas covered, this dries clear in approximately two hours at 20°C and 55% relative humidity, this will be extended at lower temperatures/or higher humidity

XIV. Maintenance and repair

A. Dryvit information sheets (DIS series)

Dryvit Information Sheets describing the maintenance and cleaning procedures together with a range of remedial methods are available from Dryvit on request.

XV. Applicator training

A. Training of applicators

To attain a Trained Contractor Certificate of Competence⁽¹⁾, individual installers must demonstrate they are conversant in all the application techniques demonstrated to them and discussed within the Dryvit programme of training undertaken. They must understand the importance of attention to detail in all aspects of Outsulation installation.

(1) The Trained Contractor Certificate indicates certain employees of the company have been instructed in the proper application of Dryvit products and have received copies of Dryvit's Application Instructions and Specifications. The Trained Contractor Program is not an apprenticeship or endorsement. Each trained contractor is an independent company experienced in the trade and bears responsibility for its own workmanship. Dryvit UK Ltd. assumes no liability for the workmanship of a trained contractor.

DISCLAIMER

Information contained in this document conforms to standard detail and product recommendations for the installation of the Dryvit Outsulation System products as of the date of publication of this document and is presented in good faith. Dryvit UK Ltd. assumes no liability, expressed or implied, as to the architecture, engineering or workmanship of any project. To ensure that you are using the latest, most complete information, contact Dryvit UK.

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