

Fosroc® Expoband H45

constructive solutions

Flexible expansion joint membrane

Uses

Expoband H45 is a Hypalon membrane system which is designed to be bonded over movement joints or cracks in structures to prevent the passage of water. It is bonded in position using Supastik E10 two-part epoxy adhesive. Expoband H45 is suitable in construction use and repair/remedial applications.

Advantages

- Accommodates continuous and pronounced cyclic movement
- Excellent resistance to weathering
- Waterproof and chemical resistant for joints above and below ground
- Heat weldable connection

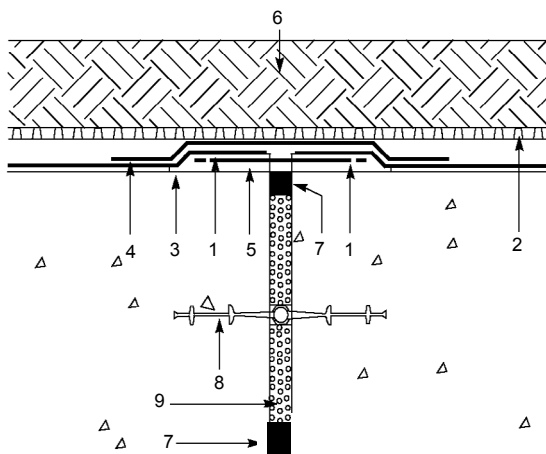
Description

Expoband H45 is an un-reinforced Hypalon membrane incorporating a central release tape.

Expoband H45 is available in 1mm thickness and widths of 100mm and 200mm, supplied in a 25 metre roll. When longer lengths are required Expoband H45 can be joined by hot welding. It is bonded to the structure on both sides of the joint using Supastik E10 two-part epoxy adhesive.

Example of a reservoir roof joint

(sealed externally with Expoband H45)

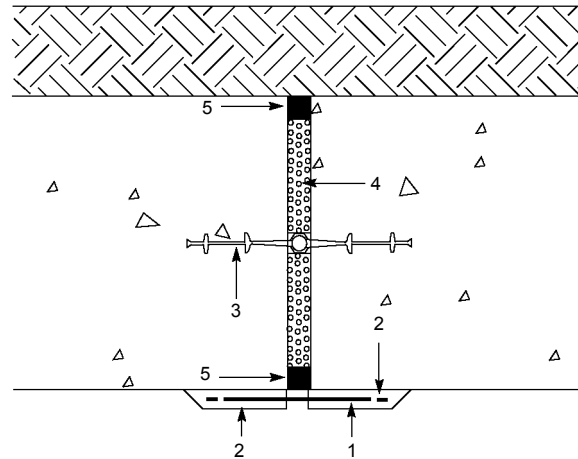


- | | |
|--|---------------------------|
| 1 Expoband H45 | 5. Supastik E10 adhesive* |
| 2 Proofex Sheetdrain* | 6. Earth Overlay |
| 3 Proofex or Famguard GS100* | 7. Nitoseal MS600* |
| 4 Famguard GS100* strap laid loose but spot bonded along each edge | 8. Supercast waterstop* |
| | 9. Hydrocell XL* |

* Also available from Fosroc

Example of Reservoir Wall

(sealed internally with Expoband H45)



- | | |
|---------------------------|--------------------|
| 1. Expoband H45 | 4. *Hydrocell XL |
| 2. *Supastik E10 Adhesive | 5. *Nitoseal MS600 |
| 3. *Supercast Waterstop | |

* Also available from Fosroc

Specification clauses

Where indicated on the drawings, joints shall be sealed with Expoband H45 flexible expansion joint membrane system supplied by Fosroc. Expoband H45 shall be installed strictly in accordance with the manufacturer's printed instructions.

Properties

Expoband H45 Hypalon membrane

| | |
|---|--------------------------------|
| Form: | Elastomeric Strips |
| Colour: | Dark Grey |
| Density: | 1.7 approximate |
| Tensile Strength: | 7.0 N/mm ² |
| Elongation at break: | 400% |
| Adhesion to concrete (with Supastik E10): | >tensile strength of substrate |

Fosroc® Expoband H45

Application instructions

Joint preparation

Expansion joints must be packed with a firm, consolidated joint filler prior to laying the Expoband H45. If necessary joints may be pre-sealed using a bituminous or elastomeric sealant. Ensure that any sealant used is capable of accommodating the anticipated joint movement. Where Expoband H45 has to be turned up parapets and the like, a splay should be provided so that the change in direction is smooth and progressive.

Surface preparation

Concrete surfaces onto which the Expoband H45 is to be laid must be sound, frost and dust free. New concrete must be fully cured and free from curing compound. The concrete surface ideally should be wood float finished for the width of Expoband H45 and free from irregularities, with well designed arrises and no vertical misalignment between each side of the joint.

Prepare a suitable width of substrate slightly wider than the membrane width selected. Sharp arrises should be ground down pencil round.

Remove all dirt, dust and laitance by rigorous wire brushing needle gun, abrasive blasting or grinding. Any spalling or honeycombing must be repaired prior to the application of the Expoband H45 system. Should the substrate be wet, dry gently with a gas torch or hot air blower. Dampness should not re-appear within 15 minutes for the substrate to be considered as being dry enough for the application of the Supastik E10. Masking tape should be applied over the sealant in the joint and, if required, on both arrises to provide an increased unbonded width and greater movement potential if required.

Priming of concrete

Priming of concrete is not normally required with the Supastik E10 / Expoband H45 system. The use of Fosroc Primer MS2 should be considered where there could be doubt about porosity or condition of the concrete.

When using Fosroc Primer MS2, empty the entire contents of the hardener tin into the base tin and replace the base tin lid. Mix thoroughly by shaking for at least 2 minutes.

Apply Fosroc Primer MS2 by brush, working well in, to a width of 25 mm either side of the membrane. Fosroc Primer MS2 should be left for about 30 minutes (depending upon temperature) to allow evaporation of the primer solvent prior to the application of the Supastik E10 adhesive.

If the primer has been left longer than 4 hours or has become contaminated with dust, the surface must be reprimed.

The rate of cure of Fosroc Primer MS2 is temperature

dependent. Ideally the substrate should be above 10°C to ensure a reasonable cure rate, however this primer can be applied when substrate temperatures are 5°C and rising.

Preparation of the membrane

This operation is vital to the adhesion and performance of the Expoband H45 system. Measure and cut the length of Expoband H45 to suit the joint.

The Expoband H45 Hypalon membrane must be prepared by thoroughly wiping both faces with Fosroc Solvent 105 and a clean cloth. DO NOT use excessive quantities of solvent. Allow 1 hour to dry before placing.

Mixing and application of the adhesive

Transfer the entire contents of Part B of Supastik E10 adhesive into the Part A container and mix thoroughly using a slow speed drill and Fosroc sealant mixing paddle for 4 minutes, stopping to scrape down the sides of the container. When mixed, the adhesive should be a uniform grey colour. Use masking tape at extremities and along centre line of joint. Apply mixed Supastik E10 using a serrated spreader.

Following application, remove central masking tape, together with any additional tape applied to arrises (as described in Surface Preparation). Immediately position membrane into the Supastik E10 with central release film uppermost.

Roll firmly to displace trapped air and to ensure extrusion of Supastik E10 through the edge perforations.

Apply a second layer of Supastik E10 to the full width of the top surface of membrane. Remove central release film from membrane. Finally remove outer edge masking tapes and feather-edge the Supastik E10.

Jointing the Expoband H45 membrane

The surfaces to be jointed must be clean and wiped with Fosroc Solvent 105 prior to jointing.

For heat welded joints, a 50 mm overlap should be used. Welding is carried out using a proprietary hot air welding tool. The tool should be set to the correct heat output by trial to achieve a satisfactory weld.

The faces of the overlap are heated by moving the welding tool along the joint and, simultaneously, pressure should be applied by roller to the heated overlap to ensure that the faces are fused together.

Water applications

After application the Expoband H45 system should be allowed to cure for 7 days before permanent contact with water.

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Ancillary materials and equipment

Supastik E10 adhesive.
Fosroc Solvent 105.
Fosroc Primer MS2.
Slow speed drill and Fosroc sealant mixing paddle.
Adhesive spreader with 2 to 3 mm serrations.
Hot air welding gun and roller.

Estimating

Supply

| | |
|----------------------|--|
| Expoband H45: | 1mm thick x 100mm wide, 25metre roll 1mm thick x 200mm wide, 25metre roll |
|----------------------|--|

Coverage

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|--------------------------|---|
| Supastik E10: | (based on a 2mm spread of adhesive above and below the membrane) For 100mm wide Expoband H45: 5 to 6 linear metres per 2 litres Supastik E10 For 200mm wide Expoband H45: 2.5 to 3.5 linear metres per 2 litres Supastik E10 Dependent upon surface roughness and film thickness |
| Fosroc Primer MS2 | 10m ² /litre |

The coverage figures are theoretical — due to wastage factors and the variety and nature of substrates, practical coverage figures may be substantially reduced.

Limitations

If the primer is left for more than 4 hours, Fosroc Primer MS2 should be removed by grinding and the surface reprimed.

Joint layouts incorporating Expoband H45 should be kept as simple as possible to allow for site joints to be restricted to straight butt joints. Avoid complex changes of angle or skew giving rise to difficulty in jointing and installation.

Do not split packs of Supastik E10 or Fosroc Primer MS2.

Storage

Expoband H45 should be stored in original unopened packaging, in cool dry conditions, away from sunlight. Fosroc Primer MS2 should be stored in accordance with the Highly Flammable Liquids and Liquefied Petroleum Gases Regulations 1972.

Precautions

Health and safety

Expoband H45

There are no known hazards associated with this product in normal use.

Supastik E10, Fosroc Primer MS2, Fosroc Solvent 105

For further information refer to appropriate Product Safety Data Sheet.

Fire

Fosroc Primer MS2, Fosroc Joint Cleaner and Fosroc Solvent 105 are flammable. Do not expose to naked flames or other sources of ignition. No Smoking. Containers should be tightly sealed when not in use. In the event of fire, extinguish with CO₂ or foam.

Additional information

Technical data — ancillary materials

Fosroc Solvent 105

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|---------------|------------|
| Flash Point: | 43°C |
| Storage Life: | Indefinite |
| Pack Size: | 5 litre |

Supastik E10

| | |
|--------------------------|--|
| Form: | Base: Off-white viscous paste Curing agent: Grey viscous paste |
| Storage Life: | 18 months in originally sealed containers stored below 25°C in cool dry conditions |
| Flash Point: | Above 65°C |
| Mixed density: | 1.2 kg/litre |
| Pot Life: | |
| 5°C: | 3 to 4 hours |
| 10°C: | 1 to 2 hours |
| 20°C: | 50 to 60 minutes |
| 40°C: | 20 to 30 minutes |
| Solids content: | 100% |
| Cure duration: | Over 15°C: 48 hours |
| Before trafficking: | 5°C to 15°C: 96 hours |
| Before immersion: | >7°C: 7 days |
| Application temperature: | 5°C to 50°C |
| Mixed Colour: | Grey |

Fosroc® Expoband H45

Fosroc Primer MS2

| | | |
|--------------------------|---|-------|
| Flash Point: | Part A: | 30°C |
| | Part B: | 107°C |
| Density: | 0.95 kg/litre | |
| Storage Life: | 18 months in originally sealed containers | |
| Application temperature: | 5°C to 35°C | |
| Tack-free time at 20°C: | 10 to 60 minutes | |
| Pack size: | 750ml | |

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Important note

Fosroc products are guaranteed against defective materials and manufacture and are sold subject to its standard Conditions for the Supply of Goods and Services, copies of which may be obtained on request. Whilst Fosroc endeavours to ensure that any advice, recommendation, specification of information it may give is accurate and correct, it cannot, because it has no direct or continuous control over where or how its products are applied, accept any liability either directly or indirectly arising from the use of its products, whether or not in accordance with any advice, specification, recommendation of information given by it.

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Certificate number FM 610