

Chevaline Dexe Roof and Deck Membrane System



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Description

The Chevaline Dexe Roof and Deck Membrane System is a heavy bodied water-borne acrylic coating reinforced with fibre-glass mat. For applications where ponding can occur (gutters, flat decks and roofs) the system incorporates a Traxx 2000 Wearcoat as the final coat of the system.

Components of the Chevaline Dexe Roof and Deck Membrane System include:

- Chevaline Epistix - A pigmented two-component waterborne epoxy coating based on a modified epoxy resin and polyaminoamide curing agent combination, used as an adhesion-promoting primer.
- Chevaline Dexe Primer - A waterborne modified acrylic primer, with special pigmentation to enhance stain-block and anti-rust capabilities. A general-purpose primer for Dexe on dry plywood and timber surfaces. Can also be used on galvanized and zincalume flashings.
- Chevprime PBT - an alternative primer for Plywood (LOSP treated), CLT or strandboard surfaces.
- Chevaline Dexe - a heavy-bodied water-borne acrylic paste ready to use from the container. It is formulated for high adhesion, and water resistance, also toughness combined with flexibility in the cured film. The Wear-coat contains graded silica for slip and wear resistance.
- 300gsm glass-fibre mat - Dexe is always used in conjunction with 300gsm glassfibre E-mat as reinforcement except for parapet detailing where 225gsm E-mat may be used.
- Chevaline Dexe Topcoat - A tough; flexible; gloss-finish, pigmented polyurethane/acrylic finishing coat. Waterborne for ease of use and formulated for maximum exterior durability, ease of cleaning, water resistance and excellent adhesion.
- Traxx 2000 Wearcoat - a UV-stable two-pot solvent-borne flexible aliphatic polyurethane available in either smooth or non-skid finish, depending on the service conditions, and provides additional protection against degradation from the sun's rays and the elements.

Intended Use

Chevaline Dexe Roof and Deck Membrane System is intended for use as a waterproofing membrane on old and new flat and near flat roofs, walk-out decks and patios, including where areas are subject to foot traffic and light vehicular traffic. It can be used as a waterproof membrane under tiles. The system is also intended for use as a liquid-applied flashing.

Conditions

- 1 The Chevaline Dexe Roof and Deck Membrane System is suitable for use:
 - a applied to the following substrates: plywood, concrete, solid plaster, fibre cement sheeting, GRC, aerated concrete, mastic asphalt, bitumen membrane, plastic (PVC), metal (including precoated), timber and timber products
 - b on buildings located
 - i in any wind zone, and
 - ii in any exposure zone (as defined in NZS 3604) except microclimates
- 2 The Chevaline Dexe Roof and Deck Membrane System shall be applied:
 - i by an approved applicator, and
 - ii in accordance with the manufacturer's instructions (product data sheets and standard specifications)

Technical Literature

- Standard Specification for the application of Chevaline Dexx on concrete surfaces P3012, April 2020
- Standard Specification for the application of Chevaline Dexx on Plywood roofs and light traffic decks P3011, April 2020
- Chevaline Dexx Technical Datasheet 301, August 2023
- Chevaline Epistixx Technical Datasheet 181, August 2023
- Chevaline Dexx Primer Technical Datasheet 304, August 2023
- Chevaline Dexx Topcoat Technical Datasheet 306, August 2023
- Traxx 2000 Wearcoat Technical Datasheet 153, September 2023
- Standard Methodology - Use of Chevaline Dexx as a Liquid Flashing, Ref: WA269 August 2023
- Chevaprime PBT Technical Datasheet 145, September 2023
- Chevaline Dexx System Technical Datasheet, August 2023
- Standard Specification for the application of Chevaline Dexx overlay on existing Chevaline Dexx or other approved liquid membrane surface P3011-1, April 2020
- Standard Specification for the application of Chevaline Dexx waterproofing membrane to plywood carparking decks P3013, April 2020
- Standard Specification for the application of Chevaline Dexx Carpark waterproofing system to concrete surfaces P3017, April 2020
- Standard Specification for the application of Chevaline Dexx on concrete surfaces in Plantrooms and Bunds P3018, April 2020

Guidance for Consenting

The impermeability of the membranes requires that consideration be given to the effective control of moisture in the roof structure. Fully closed in construction spaces under the membrane without cross ventilation provided by the ceiling structure below, or soffit vents, must have adequate ventilation to prevent the accumulation of moisture.

Building Code Compliance

When used as described above, Chevaline Dexx Roof and Deck Membrane System meets or contributes to the following relevant performance requirements of the New Zealand Building Code

Clause B2 Durability: Performance Clauses B2.3.1 (a)*, B2.3.1 (b), B2.3.2* (* where difficult to access or replace e.g. where protected by tiles or screed)

Clause C3 Fire affecting areas beyond the fire source: Performance Clauses C3.4(b)

Clause D1 Access routes: Performance Clauses D1.3.3(d)

Clause E2 External moisture: Performance Clauses E2.3.1 (contributes to), E2.3.2, E2.3.7

Clause F2 Hazardous building materials: Performance Clauses F2.3.1

Supporting Information

- Acceptable Solutions and Verification Methods for New Zealand Building Code Clause B2 Durability Second edition (Amendment 12), 28 November 2019
- Acceptable Solutions and Verification Methods for New Zealand Building Code Clause D1 Access Routes Second edition (Amendment 6), 1 January 2017
- Verification Methods E2/VM1 and Acceptable Solutions E2/AS1, E2/AS2 and E2/AS3 for New Zealand Building Code Clause E2 External Moisture Third edition (Amendment 10), 5 November 2020
- Singapore Institute of Standards and Industrial Research "Evaluation of High Performance Water-based Liquid Applied Waterproofing System for Rooftop with Secondary Slabs for Public Housing Blocks", June 1994
- Singapore Institute of Standards and Industrial Research "Evaluation of Dexx Waterproofing System with Reinforcement", March 1996
- OPUS Slip Resistance Report D99032, "Chevaline Dexx with Chevaline Dexx Wearcoat", 27 June 1999

- BRANZ Test Report DC16839-01-1, Report on Testing of Chevaline Dexx Membrane to the Requirements of AS4654.1-2012, 9 March 2023
- BRANZ Test Report DC16839-02-01, Report on Testing of Chevaline Dexx Membrane to the Requirements of AS4858:2004, 4 May 2023
- AWTA Test Report 18-005761, Chevaline Dexx Waterproof Membrane, 22 January 2019
- Joyce Group Report JN: 6419 Verification of Chevaline Dexx Waterproofing System, May 2005

Clause B2 Durability: Performance Clauses B2.3.1 (a)*, B2.3.1 (b), B2.3.2* (* where difficult to access or replace e.g. where protected by tiles or screed)

Basis of Compliance: By comparison with Verification Method B2/VM1

The Chevaline Dexx Roof and Deck Membrane System has a successful history of use as a roof and deck membrane system in New Zealand for more than 40 years. Inspections on several buildings with Dexx installed between 1988 and 1991 reported by Joyce show the system performing well after 17 years service. Recent inspections on several other buildings with Chevaline Dexx applied showed the membranes in good condition and performing well after 12 years. SISIR testing showed retention of mechanical properties after accelerated aging and accelerated fluorescent UV/condensation aging with only a slight change in colour. Chevaline Dexx Membrane meets the requirements of AS4654.1-2012 Waterproofing membranes for external above-ground use Part 1: Materials, for abrasion resistance (pedestrian traffic), temperature resistance, ultraviolet resistance and durability.

Clause C3 Fire affecting areas beyond the fire source: Performance Clauses C3.4(b)

Basis of Compliance: By testing and comparison with Acceptable Solutions C/AS1 and C/AS2

The Chevaline Dexx Roof and Deck Membrane System suitable for use on exitways (and other areas) for all buildings. The Critical Radiant Flux when tested to ISO 9239.1 is greater than 11 kW/m² and exceeds the minimum required by code clause C3.4(b).

Clause D1 Access routes: Performance Clauses D1.3.3(d)

Basis of Compliance: By testing and comparison with Acceptable Solution D1/AS1

The Chevaline Dexx Roof and Deck Membrane System is suitable for use on access routes. The coefficient of friction of Chevaline Dexx is 0.76 (dry) and 0.44 (wet). The coefficient of friction for Chevaline Dexx Wearcoat is 0.76 (dry) and 0.67 (wet).

Clause E2 External moisture: Performance Clauses E2.3.1 (contributes to), E2.3.2, E2.3.7

Basis of Compliance: By analysis and comparison with E2/AS1

This product is outside the scope of Acceptable Solution E2/AS1, and also outside the scope of the Code of Practice for Torch-on Membrane Systems for Roofs and Decks. However, the installation of the Chevaline Dexx Roof and Deck Membrane System and the construction details in the manufacturer's technical literature are consistent with the principles of those documents. Chevaline Dexx Membrane meets the requirements of AS4654.1-2012 Waterproofing membranes for external above-ground use Part 1: Materials, for cyclic movement, elongation at break, tensile strength, water vapour transmission rate and bond strength. Chevaline Dexx Roof and Deck Membrane System also meets the requirements of AS/NZS 4858:2004 Wet Area Membranes referenced by Acceptable Solution E2/AS1.

Clause F2 Hazardous building materials: Performance Clauses F2.3.1

Basis of Compliance: By comparison with the performance requirements of Building Code clause F2.3.1

Chevaline Dexx Roof and Deck Membrane System has no components giving rise to harmful concentrations at the surface of the material where the material is exposed or in the atmosphere of any space.

Supplementary Information

Chevaline Dexx is manufactured in New Zealand by Equus Industries Ltd (NZBN 9429032000306).

This product is not subject to any warning or ban declared by MBIE under section 26 of the Building Act 2004.
