

Class 1

Building Product Information Sheet

Product Name

Krystol T1® Waterproof Crystalline Coating

Product description and its intended use

Krystol T1 is a surface-applied crystalline waterproofing treatment for concrete structures that is used to protect against the ingress of water. It is a dry powder, that when mixed with water becomes a coating that is applied to the inner or outer sides of a concrete structure.

Product identifier (if applicable):

Product Code: K-210 (Krystol T1)

Place of manufacture

Canada

Legal and trading name of the manufacturer(s):

Kryton Internal Inc

Address for service:

STREET NAME	1645 East Kent Avenue	SUBURB	
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CITY, COUNTRY	Vancouver, British Columbia, Canada	POSTCODE	V5P 2S8
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Website:	www.kryton.com
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Email address:	info@kryton.com
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Phone No. (if applicable):	+001 604 324 8280
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Legal and trading name of the importer:

Stratmore Construction Solutions Limited			
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STREET NAME	185 Rata Street	SUBURB	Naenae
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CITY, COUNTRY	Lower Hutt New Zealand	POSTCODE	5011
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Website:	www.stratmore.co.nz
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Email address:	info@stratmore.co.nz
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Phone No. (if applicable):	+64 4 567 8436
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NZBN (if applicable):

9429040948867

Relevant Building Code clauses:

B2 Durability: Performance B2.3.1a (50 years), **B2.3.1b** (15 years) and **B2.3.1c** (5 years) for precast and poured insitu concrete.

B2 Durability: Performance B2.3.1b (15 years) and **B2.3.1c** (5 years) for masonry concrete structures.

E1 Surface Water: Performance E1.3.3 (c) when used as a waterproof coating on concrete drains or channels.

E2 External Moisture: Performance E2.3.2 and E2.3.3

F2 Hazardous Building Materials: Performance F2.3.1

Statement on how the building product is expected to contribute to compliance:

Krystol T1 Waterproof Coating, specified and installed in accordance with the technical data sheets and the application instructions, will meet (or assist in meeting) the following provisions (clauses) of the New Zealand Building Code:

B2 Durability: Performance B2.3.1a (50 years), **B2.3.1b** (15 years) and **B2.3.1c** (5 years) for precast and poured insitu concrete.

B2 Durability: Performance B2.3.1b (15 years) and **B2.3.1c** (5 years) for masonry concrete structures.

Krystol T1 Waterproof Coating complies with the requirements of B2 Durability sub clauses a, b and c for precast and in-situ concrete substrates.

Due to the nature of composition of masonry blocks, specific application instructions must be followed and the waterproofing monitored over time. The application must be able to be inspected in case of movement of the substrate causes damage to the Krystol application in order to comply with B2.3.1b.

Krystol T1 meets the requirement for durability performance as the crystalline growth that occurs to make the substrate waterproof is permanent and integral to the substrate. If hairline cracking should occur (up to 0.5mm), then self-sealing of the substrate will occur. Once sufficient growth of material into the substrate has occurred, the outer coating does not need to remain intact for durability performance (the coating should be left intact for masonry substrates)

Krystol T1 will not adversely affect concrete onto which it is applied and concrete coated with Krystol T1 will have its expected durable life.

Concrete treated with Krystol T1 will have improved properties that are likely to extend the life of the concrete. Application of Krystol T1 onto concrete will reduce its permeability relative to an equivalent concrete at the same water/cement ratio.

Compliance is shown by the following reports:

- T1 - Approval - Malaysia - SIRIM Certification (ASTM D4541) - 2012
- T1 T2 - CDA - BC - RM HARDY - Summary - Sulphate Resistance – 1976
- T1 T2 – CDA – HBT AGRA – TEST – Chloride Penetration – 1993

Adhesion of Krystol to the substrate is shown by the first report indicating substrate failure. Resistance of concrete to harmful waterborne chemicals such as sulphate and chloride ions is shown in the second and third reports, even after removal of the Krystol coating. Concrete durability is enhanced.

E1 Surface Water: Performance E1.3.3 (c) when used as a waterproof coating on concrete drains or channels.

Krystol T1 waterproof coating will assist in meeting this requirement by rendering the concrete drain or channel substrate waterproof.

E2 External Moisture: Performance E2.3.2 and E2.3.3

Krystol T1 waterproof coating when installed in accordance with the application instructions meets the requirements of clauses E2.3.2 and E2.3.3 per E2 AS/3 (CCANZ CP 01) of the NZBC. Compliance with CCANZ CP 01 is achieved by a significant reduction in water permeability under pressure of coated substrates compared to control substrates thereby providing results exceeding the requirements of weathertight concrete, CCANZ CP 01 Section 4.5.

When applied to concrete masonry construction, the specific application instruction for concrete block walls must be closely followed as waterproofing of masonry construction using Krystol T1 requires specific procedures.

Compliance is shown by the following reports:

- T1 T2 - USA - NY NJ - Pt Auth - Test - Permeability Self Sealing – 1983
- KIM & T1 T2 - India - Bureau Veritas - Test - Din 1048 – 2013
- T1 T2 - Canada - Kryton - Test - Permeability – 2015

The reports clearly show a reduction in moisture penetration far below even that specified for weathertight concrete under CCANZ CP 01.

F2 Hazardous Building Materials: Performance F2.3.1

Once cured, Krystol T1 waterproof coating meets this requirement and will not present a health hazard to people. Krystol T1 is safe for contact with potable water, certified by NSF to NSF/ANSI Standard 61 Drinking Water System Components – Health Effects.

Limitations on the use of the building product:

To ensure compliance with the NZBC, design of the substrate to which the Krystol waterproof coating is to be applied needs to comply with the relevant NZ building standards including NZS3101 and 3109 for concrete structures and NZS4229 or NZS4230 for masonry concrete construction and with reference to CCANZ CP 01.

The Krystol T1 Waterproof Coating is an effective waterproofing system for rigid concrete structures only and may not be reliable for structures that experience constant or repeated movement.

Due to the nature of composition of masonry blocks, Application Instruction 2.13 must be followed and the waterproofing monitored over time. The application must be able to be inspected as required during the waterproofing crystal growth period.

The building structure design must incorporate details for waterstops and waterproofing of joints, junctions, penetrations and the like as these are not covered by the application of Krystol T1.

Design requirements that would support the use of the building product:

To ensure compliance with the NZBC, design of the substrate to which the Krystol waterproof coating is to be applied needs to comply with the relevant NZ building standards including NZS3101 and 3109 for concrete structures and NZS4229 or NZS4230 for masonry concrete construction and with reference to CCANZ CP 01.

Installation requirements:

The Krystol T1 waterproof coating must be installed in accordance with the current Krystol Technical Data Sheet (visit <https://www.krystol.co.nz/existing-concrete-waterproofing/>) and scroll down to Crystalline Waterproofing System subsection) and the Application Instruction 2.11 – Krystol T1 Surface Applied Concrete Waterproofing (and where necessary, the Application Instructions referred to within Application Instruction 2.11 for remedial work of the substrate to fix holes and leaks).

For masonry walls, Application Instruction 2.13 Block Wall Repair must be followed (and any Application Instructions referred to within).

Application Instructions are found at: <https://www.krystol.co.nz/existing-concrete-waterproofing/>

Maintenance Requirements:

The Krystol T1 Waterproof Coating does not require maintenance.

Is the building product/building product line subject to warning or ban under section 26?:

☐ Yes

☒ No

If yes, description of the warning or ban under section 26:

Date: 16 August 2023