



CERTIFICATE OF TECHNICAL APPROVAL

Dubai Central Laboratory Department (DCLD) of Dubai Municipality,
hereby award this certificate to :

KRYTON INTERNATIONAL INC –CANADA


For the product(s)

KRYSTOL INTERNAL MEMBRANE (KIM)

(As per the attached details)

Manufactured by :

KRYTON INTERNATIONAL CANADA


AMIN AHMED MOHAMMAD
Director, Dubai Central Laboratory Department
Dubai Municipality



TA Certificate No.: 139 -2013
Valid Until : 11-06-2017

Current Issue Date: 27-10-2016
Original Issue Date : 12-06-2014

The above product(s) have been assessed and found fit for their intended use, provided they are used according to the supplier instructions.

*The attached details bearing the same Certificate No. forms an integral part of this certificate.
This certificate is subject to the Terms and Conditions of the technical approval system*



1- The Company

“KRYTON INTERNATIONAL INC. - CANADA”

2- Product trade name: Krystol Internal Membrane – (KIM-HS)

3- Product Description:

Krystol Internal Membrane (KIM) is a powder admixture, consisting of blended Portland cement and proprietary chemicals, that when incorporated in concrete enhances the water resistance and durability of the hardened concrete.

(For more information refer to the BBA Agrément Certificate No 05/4217)

4- Concrete properties:

The effect of the product on the properties of a 35/20 OPC concrete mix, as tested by Dubai Central Laboratories, is given in Table 1.

Table 1 : Effect of KIM-HS on the properties of concrete.

Property		Test reference	Control concrete	With KIM-HS
Slump of fresh concrete (mm)	Initial	BS EN 12350-P-2	220	220
	30 min.		170	180
Compressive strength (MPa)		BS 1881: P-116 28 days	52.7	50.2
Water absorption (%)		BS 1881: P-122 28 days	2.4	2.5
Depth of penetration (mm)		BS EN 12390: P-8 28 days	11.7	2.3
Chloride Ion penetration (Coulombs)		ASTM C 1202 28 days	4367*	3223*
<p>* Dubai Municipality specifications require that the Chloride Ion penetration shall not exceed 2000 Coulombs. This property together with other properties is dependent on the concrete mix design. The purpose of this investigation scheme was to show that the product enhances the concrete property and it was not intended to check the appropriateness of the concrete mix design used in the study.</p>				

5- Scope of approval

The scope of approval covers KIM –HS only

Exclusions

This approval does not cover other type of KIM products.

6- Product Intended use:

KIM is a chemical admixture used for the treatment of concrete and concrete products to protect against water intrusion, leakage and cracking.

(The concrete containing the KIM –HS product is suitable in contact with potable water and has been approved by NSF /ANSI certificate No. 660-01)

7- Conditions of Approval

- 7.1 This approval is granted only to “KRYTON INTERNATIONAL INC. No other company, firm or person may hold or claim any entitlement to this Technical Approval.
- 7.2 This Approval is based on the British Board of Agrément (BBA) Technical Approval Certificate No. 05/4217. In this regard all conditions of the BBA Certificate shall apply.
- 7.3 This Technical Approval will remain valid for the period shown on the Approval Certificate provided that.
 - 7.3.1 The BBA Agreement Certificate No. 05/4217 remains current,
 - 7.3.2 The characteristics of the product are unchanged,
 - 7.3.3 The Company complies with all the requirements of the BBA Agrément Certificate No. 05/4217,
 - 7.3.4 Continue to be checked by DM as per clause 7.6 of this report
- 7.4 In granting this Technical Approval, Dubai Municipality makes no representation as to:
 - 7.4.1 The presence or absence of patent or similar rights subsisting in KIM.
 - 7.4.2 The legal right to market KIM-HS in the Emirate of Dubai.
- 7.5 The Technical Approval shall not be used in such manner as to bring Dubai Municipality into dispute and “KRYTON INTERNATIONAL INC.”, shall not make any statement which Dubai Municipality may consider as misleading.
- 7.6 Surveillance
 - 7.6.1 Inspection and testing
Dubai Municipality maintains the right to inspect the products at any time without prior notice and to collect samples from the products available at the

client's warehouses or at any building site within Dubai Emirate, for the purpose of verification and/or testing.

7.6.2 Declarations of shipments

"KRYTON INTERNATIONAL INC " shall provide Dubai Central Laboratory in writing with details of all deliveries to building sites in Dubai not later than 48 hours before delivery.

7.6.3 Cost of sampling and testing

"KRYTON INTERNATIONAL INC " shall bear the cost of sampling and testing of the product either at Dubai Central Laboratory (DCL) or at any other DCL approved laboratory. The testing laboratory may be any local, regional or international laboratory.

7.7 TA mark shown in the following image shall be part of the labeling/markings by bags or pails



7.8 Failing to satisfy the conditions of this Technical Approval Certificate may be grounds for terminating the Technical Approval.

8- Disclaimer

8.1 The Dubai Municipality - Dubai Central Laboratory Department shall not be held liable for any action (legal or otherwise) raised by any party on matters resulting from implementation of the Technical Approval.

8.2 Dubai municipality rules and regulation supersede the BBA certificate in case of conflicts.