



RAZON

Qurit 3M

(High Performance and Technologically Advanced Integral Curing Additive for Concrete)

Qurit 3M is an innovative and technologically advanced, high performance fluid interfusion additive designed specifically to ensure integral curing, super-plasticity, workability retaining, water reduction and strength improvement at all stages in concrete mixes.

Features

- Qurit 3M contains hygroscopic molecules which bind moisture adsorbed on the aggregates and interstitial spaces in the concrete. This moisture is not allowed to travel to the surface, thus preventing capillaries
 - This captive moisture acts as a heat sink for the hydrating concrete, thus practically eliminating cracking of concrete.
 - During the reactive phase of cement (upto 28 days) as the cement crystallization proceeds, this captive moisture is available to the cement for complete hydration reaction.
 - This serves as the Integral curing mechanism via which the concrete achieves complete and through hydration, as compared to water sprinkling curing methodologies.
- Plasticizing properties ensure lower water-cement ratios, and thorough dispersion at low water cement ratios
 - Renders cohesiveness and ease in pumpability to the concrete.
 - Does not affect the setting time of the cement
 - Saves approx. 60 liters of precious potable water per sq foot of concrete which is otherwise spent in the curing process.
 - Conventional curing for vertical concrete members is generally ineffective because the concrete is never soaked during sprinkling of water, rather it only superficially appears wet, which affects the structural integrity.
 - Razon Qurit 3M improves compressive, tensile and flexural strength of concrete at all ages- without external curing.
 - Protects reinforcing steel, ideal for high grade concrete, (HPC) High performance concrete and (UHPC) Ultra High Performance Concrete.

Advantages

- Integral curing mechanism, more predictable. No external curing required. Prevents cracking in the concrete.
 - Prevents capillary formation in the concrete eliminating need to add separate waterproofing agent.
- Concrete columns, shear walls and retaining walls- of large basements of residential commercial structures like malls, hospitals multiplexes etc. These members are never thoroughly cured by conventional methods.
 - Concretes Columns of metro's, aqueducts, bridges, towers, and other such vertically cast concretes
 - Concrete pavements and slabs which tend to crack due to hydration heat especially in the

first 24 hours of placing concrete & another reason being ineffective curing.

- High rise structures where high grade concrete and wind velocities are challenges.
- Hot weather concrete, especially in arid regions
- Foundation of windmills, electricity transmission towers, and other concretes which are placed in remote locations like mines, canals, culverts etc.
- Concrete pavements and other infrastructure projects where concrete is exposed in remote locations and under extreme climatic conditions
- Industrial applications like preparation of precast concrete articles like slabs, panels, exposed aggregate finish panels, and other cementitious products.
- High strength mortars and dry mix products which require integral curing properties.
- Sprayed concretes, and concretes placed in underground mines, tunnels etc.

Method of Use

Qurit 3M is added to the fresh concrete as an admixture, suitably dosed at the batching plant itself. This ensures homogenous mixing of the additive in the entire concrete.

It is advised that Qurit 3M be mixed into the concrete by mechanical means, i.e. do not use for hand mixed concretes.

The prepared concrete is batched as per usual methods using Qurit 3M.

Qurit 3M is added at a dosage of 0.5-1.5% by weight of cement, which is sufficient for the entire curing of the concrete.

Qurit 3M is effective for concretes ranging between M-15 to M-80 grades.

After the addition of Qurit 3M, the concrete is agitated so that the additive disperses throughout the concrete, and then the concrete could be discharged from the mixer into the transit mixer for placing.

Allow sufficient time for the concrete to strengthen, as per your usual stripping or de-moulding times.

No other precaution to be taking for curing after this. The team can prepare for pouring of concrete into the next segment.

Qurit 3M is suitable for concretes mixed and placed in tropical to arid climates.

Lab trials should be conducted as per site requirements.

Since the curing of concrete prepared using Qurit 3M continues even beyond 28 days, the content of Fly ash / Slag / Micro Silica in the concrete could be optimized for low heat concrete and/or commercial purposes.

Because of its heat dissipating properties, Qurit 3M could be used as an admixture in mass concrete applications where Ice is used to maintain concrete temperatures and prevent micro-cracking.

For further details/ specific applications contact the RAZON technical team via email.

Razon Qurit 3M is chloride free and completely safe for concretes with reinforcement steels. Also, due to its capillary preventing properties it provides an increased protection to the reinforcing steel.

Performance

Ordinary Portland Cement 53 Grade	450 kg
10 mm Crushed Stone Aggregate (Coarse Aggregate)	1064 kg
Crushed Stone Sand (Fine Aggregate)	836 kg
Razon Qurit 3M	4.5 kg
Water (T)	190 litres
Slump Flow Test at 180 minutes	> 550 mm
Compressive Strengths Without Water Curing	
3 days	36.53 N/mm ²
7 days	50.77 N/mm ²
28 days	59.06 N/mm ²

Properties

No	Property	Qurit 3M
1	Consistency	Free flowing fluid
2	pH	5-8
3	Boiling point	>96°C
4	Dilute-ability	Upto 100%
5	Shelf life	12 months
6	Storage condition	5 ^o - 40 ^o C
7	Specific Gravity	1.15 ± 5%



All RAZON products are manufactured under very stringent protocols and thus are guaranteed against manufacturing defects. It is strongly recommended that lab trials be conducted using your formulation, conditions and available raw materials to evaluate the product. In spite of our voluminous efforts in R&D and testing against various raw materials, some materials and conditions are beyond our control and preparedness. It is strongly recommended that site trials be conducted using site conditions and available raw materials to evaluate the product. Since site materials and conditions are beyond our control and since above suggestions and recommendations are based on our site trials and laboratory product evaluation & trials, and since methods of use at site are beyond our control. Hence, no guarantee can either be implied or enforceable.



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AN ISO 9001:2015 ACCREDITED MANUFACTURER

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