



# RAZON

## RAZON QURIT- P 702 (Integral curing compound for concrete)

Plasticizing, workability retaining, strength improving additive with integral curing mechanism for most grades of concretes; suitable in most climatic conditions.

### Features

- 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.
- 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 just superficially appears wet, which affects the structural integrity.
- Razon Qurit 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.
- Promotes higher use of GGBS/ Fly ash due to assured curing even after 28 days.

### 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.
- Plasticizing properties ensure lower water-cement ratios, and thorough dispersion at low water cement ratios
- Applications
  - 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**

Razon Qurit 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 Razon Qurit 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, and Razon Qurit is added to the concrete after the superplasticizer admixture is added to the concrete. By addition of this product it is observed that the water cement ratio of the given mix is reduced and the dosage of the superplasticizer is slightly reduced as well.

Razon Qurit is added at a dosage of 1 kg per 50 kgs of cement, which is sufficient for the entire curing of the concrete.

Initially all aggregates and cement are blended, water and superplasticizer is mixed into the concrete, after which the additive Razon Qurit is added to the concrete.

Razon Qurit is effective for concretes ranging between M-20 to M-80 grades.

After the addition of Razon Qurit, 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.

This product does not affect the setting time of the concretes, which could be adjusted by modulating the dosage of superplasticizer-retarder admixture for placing and finishing times.

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.

Razon Qurit is suitable for concretes mixed and placed in tropical to arid climates. Suitable non chloride admixtures must be added for placing concretes in cold and freezing temperatures. Lab trials should be conducted in such conditions.

Since the curing of concrete prepared with RAZON Qurit continues even beyond 28 days, the content of Fly ash / Slag in the concrete

could be optimized for low heat concrete and/or commercial purposes.

Because of its heat dissipating properties, Razon Qurit 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 is chloride free, and complete safe for concretes with reinforcement steels. Infact due to its capillary preventing properties it provides an increased protection to the reinforcing steel .

### Performance characteristics of concrete with Razon Qurit

TEST RESULTS OF CONCRETE CAST WITH FOLLOWING PROPORTIONS AND ONLY AIR CURED FOR UPTO 28 DAYS.										
Grade	Cement	Fly ash	20 mm	10 mm	Sand	W/c	Super Plasticizer	Razon Qurit	7 day	28 day
M-30	315 kg	75 kg	753 kg	423 kg	879 kg	0.37	0.85%	2%	30 N/mm <sup>2</sup>	43 N/mm <sup>2</sup>
M-40	355 kg	85 kg	752 kg	405 kg	853 kg	0.34	0.9 %	2%	42 N/mm <sup>2</sup>	58 N/mm <sup>2</sup>
M-50	400 kg	70 kg	740 kg	402 kg	855 kg	0.30	0.9 %	2%	55 N/mm <sup>2</sup>	67 N/mm <sup>2</sup>

### Properties

No	Property	Razon Qurit P
1	Consistency	Free flowing liquid
2	pH	5-9
3	Boiling point	>96 <sup>0</sup> C
4	Dilute-ability	Upto 100%
5	Shelf life	12 months
6	Storage condition	5 <sup>0</sup> - 40 <sup>0</sup> C
7	Viscosity 27 <sup>0</sup> C	200 cSt
8	Specific Gravity	1.15 ± 5%
9	Appearance	Amber Coloured Fluid



### OTHER PRODUCTS:-

- + Oil base & water base shutter release agents- SC 17000 & SC 20003
- + M-75 grade concrete repair mortar- Strextra R-20
- + Polymer base Tie road filler
- + Crystalline Waterproofing

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. Inspite 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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