

AQURON® 300

MIXWATER CONDITIONER ADDITIVE

■ MANUFACTURER

AQURON® CORPORATION INTERNATIONAL

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■ PRODUCT DESCRIPTION

Aquron® 300 Concrete Mix Water Conditioner is a clear, environmentally neutral, non-toxic, odorless colloidal liquid.

■ BASIC USE

Aquron® 300 Concrete Mix Water Conditioner added to cement concrete mix water produces extraordinarily strong, hard, and impermeable concrete. **Aquron® 300 Concrete Mix Water Conditioner** achieves this accomplishment in several ways beginning with improvement in the quality of hydrolysis-hydration by-products followed by promoting significant increase in mix water performance and already included cement utilization, providing additional cement paste volume, per cement particle, without including additional cement in the mix. Through an increase in utilization of the already included cement and mix water, concrete's performance values are significantly improved through enhancing the plastic concrete mix such as production of fine-textured very homogeneous cement paste with smaller more uniform pore sizes, lower void space percentages, improved workability/increased lubricity, less bleed water volume at surface, and a much improved permeability factor, improvements which translate to improved durability. **Concrete Mix Water Conditioner** provides mix water the ability to initiate hydration without the normal cement potency loss, usually ascribable to mix water dilution/hydrolysis.

Aquron® 300 Concrete Mix Water Conditioner ensures that freshly-produced cement paste contacting/coating mix's aggregate is of the highest possible quality, a factor which significantly improves cement paste-to-aggregate bond quality, further increasing flexure strength. **Aquron® 300 Concrete Mix Water Conditioner** improves calcium hydroxide quality, providing for a more efficient lamination of the silicate polymer particles, strands and chains, an action that also reduces the volume of unused calcium hydroxide in the set concrete.

Aquron® 300 Concrete Mix Water Conditioner provides ingredients which prompt the prolific formation, extending, and/or branching of silicate polymer particles, strands and

chains, the main constituents of tobermorite gel, which is the main strength component of concrete. **Aquron® 300 Concrete Mix Water Conditioner** utilization produces concrete with greater durability and freeze damage resistance, factors of major consequence, since these factors are normally associated with extending concrete's useful lifespan. Importantly, **Aquron® 300 Concrete Mix Water Conditioner**, added to mix water, causes significant reduction in the ultimate size of unused cement particle cores, left in concrete to act as aggregates. Various, smaller than usual, sizes causes the particle cores to subsequently become excellent unreachable filler aggregate, sized somewhere between sand and cement grain sizes, providing filler benefits, similar to silica fume, resulting in denser, stronger, more impermeable concrete with higher integrity, less susceptibility to contaminate pollution, freeze damage, imbedded steel corrosion, and etc.. **Aquron® 300 Concrete Mix Water Conditioner** utilization provides Portland cement concrete many unique benefits, and requires no special handling, storage, mixing, finishing, or curing techniques. Also importantly, **Aquron® 300 Concrete Mix Water Conditioner** increases cementitious material (cm) content of concrete by utilizing greater volumes of the already included cement, therefore allowing a mix water volume increase while still producing concrete with low water-cement (w-c) ratio quality, or better, because of higher cementitious material-water ratios.

■ PRECAUTIONS

Aquron® 300 Concrete Mix Water Conditioner must be thoroughly mixed with the mix water before the introduction of Portland cement, aggregates and fines.

■ SOME ATTRIBUTES

- Adds workability by increased lubricity
- Alleviates/plastic cracking
- Reduces bleed water volume
- Improves strengths
- Increases density
- Increases impermeability and durability
- Improves surface abrasion resistance
- Lowers internal chemical reaction potential
- Eliminates capillary action potential
- Reduces absorption rate
- Lowers/eliminates potential for dusting
- Lowers chloride induced corrosion potential
- Lowers/eliminates slab curl potential
- Increases acid/chemical resistance
- Decreases cementitious material waste
- Works to reduce shrinkage cracking

■ PHYSICAL PROPERTIES

Physical.....	liquid
Color	water-clear
Odor	none
pH.....	12±
Flash point.....	none
Flammability.....	none
Toxicity	none
Pollutants.....	none
Hazardous vapors.....	none
Spill clean-up	dilute/flush using water
Environmental impact	none/neutral
User status.....	friendly
Abrasion resistance	excellent
VOC/VOS compliant.....	yes

■ DIRECTIONS FOR USE

DOSAGE

Aquron® 300 Concrete Mix Water Conditioner is added to concrete's mix water at the rate of 10 fluid ounces per 100lb/6.5ml per Kg of cement, or if using a mix water tank for variable cement content batching, please contact your area distributor or the Aquron Corporation International for technical assistance.

NORMAL BATCHING

Aquron® 300 Concrete Mix Water Conditioner must be mixed into 80% of the batching mix water before introduction of any other mix materials eg. cement, aggregate, fines etc..

When batching in a transit mixer, **Aquron® 300 Concrete Mix Water Conditioner** must be utilized as follows:

- Place 80% of concrete's mix water in transit mixer.
- Place the designed amount of **Aquron® 300 Concrete Mix Water Conditioner** in transit mixer.
- Rotate mixer drum 8-10 revolutions.
- Add cement sand and aggregate.
- Add remaining mix water.
- Mix batch for at least 15 minutes at no more than 10-15rpm.

The total mix must be kept mixing for a minimum of 180 revolutions.

With an **Aquron® 300 Concrete Mix** the Water/Cement

ratio is normally between .49 and .54. With slump being adjusted with just potable water.

Note: very little added water usually dramatically increases slump.

CONTINUOUS MIXING

Aquron® 300 Concrete Mix Water Conditioner is added or injected into, mix water at the rate of 10 fluid ounces to 3.5 US gallons/22ml per L, prior to combining the mix water with cement, for operations such as flowcrete, shotcrete, gunite etc.

OTHER ADDITIVES

If mix design requires other additive call Aquron Representatives to ensure and check product compatibility.

TEST CYLINDERS

Aquron® 300 Concrete Mix Water Conditioner Test Cylinders must be taken after full mixing period only. Note **Aquron® 300 Concrete Mix Water Conditioner** is one part of a two part system which includes cure and sealing with **Aquron® 2000**.

■ SHELF LIFE

Shelf life is indefinite provided containers are kept tightly sealed when not in use.

■ PACKAGING

Aquron® 300 Mix Water Conditioner is available in 5 gallon/18.9 liters and 55 gallon/208.2 liters drum size. **Aquron 300 Concrete Mix Water Conditioner** is also available in bulk containers.

■ MAINTENANCE

No special maintenance or finishing of concrete is required.

■ TECHNICAL SERVICES

Technical information and assistance may be obtained from your local dealer, or by calling the technical department of the Aquron Corporation International at 972-722-5444, (1-800) 342-4649, or 972-722-6412 Fax or Toll Free Fax (1-888) 412-1543.

WARRANTIES AND LIMITATIONS OF LIABILITY

Aquron Corporation International ("Seller") warrants that if any goods supplied prove defective in workmanship or materials, that Seller shall replace them or refund their purchase price. User holds harmless Aquron Corporation International of any liability arising from the improper use of **Aquron® 300 Concrete Mix Water Conditioner**, and user assumes all risk and liabilities whatsoever in connection therewith. The terms of this paragraph may not be orally modified. There are no warranties express or implied which extend beyond the face herewith.



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