



# AQURON<sup>®</sup> 2000 Cure & Seal<sup>™</sup>

Proven Since 1985

## Concrete Cure & Seal Solution CONCRETE PROTECTION AND WATERPROOFING

### MANUFACTURER

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### PRODUCT DESCRIPTION

**AQURON<sup>®</sup> 2000 Cure & Seal<sup>™</sup> Solution Treatment** is an environmentally neutral, user friendly, waterborne product formulated to not only give a superior cure and seal, but to also impart significant strength and integrity to every concrete pour (available with or without white pigmentation).

### BASIC USE

**AQURON<sup>®</sup> 2000 Cure & Seal<sup>™</sup>** is a unique one step cure and seal process that provides every beneficial function associated with curing concrete, plus much more. **AQURON<sup>®</sup> 2000 Cure & Seal<sup>™</sup>** solution out performs water curing in every aspect, i.e. durability, impermeability, strength, etc. As **AQURON<sup>®</sup> 2000 Cure & Seal<sup>™</sup>** solution touches the surface of concrete it quickly penetrates out of sight (except for its pigment, if applicable) to the bottom of the concrete's surface porosity to the top of the concrete's matrix where within seconds upon its arrival it forms a vapor permeable subsurface internal membrane. This instantly prevents moisture or water from leaving the fresh concrete. From that point on water can only escape from the concrete in fine vapor form. This aspect effectively works to sustain a high humidity environment inside the concrete long enough to sufficiently hydrate the mix's available cement content. The length of time to accomplish this is dependent upon cement composition, fineness, and moisture proportions. Even extremely low water/cement ratio mixes requiring at least an 80% relative humidity environment to prevent self-desiccation will benefit from the **AQURON<sup>®</sup> 2000 Cure & Seal<sup>™</sup>** created environment. **AQURON<sup>®</sup> 2000 Cure & Seal<sup>™</sup>** solution also contains ingredients capable of penetrating deeply into fresh concrete and its cement paste component. These same ingredients provide to mix water utilized for the cement hydration process (to a degree, depending on cement composition) particle fineness and richness of mixture. Duration of the hydration period may be extended, but since concrete's hydration processes are accelerated through the use of **AQURON<sup>®</sup> 2000 Cure & Seal<sup>™</sup>** solution, hydration time is achieved in a significantly shorter time period through production of additional calcium silicate hydrate (CSH). Hydration continues as long as a space (capillary porosity) for hydration product and moisture is available. Generally the more hydration product (CSH) produced, the stronger, harder, more durable, more impermeable etc., the concrete becomes. **AQURON<sup>®</sup> 2000 Cure & Seal<sup>™</sup>** solution provides concrete with a superior cure, producing greater volumes of hydration product reinforcing its

C-S-H gel component (the strength component of concrete) by lowering its total percentage of capillary voids through increased hydration product (CSH) production, concrete is permanently integrally sealed to prevent water and other contaminants from entering or passing through its matrix except for light atomic weight gasses such as oxygen, allowing concrete to breathe as is necessary. The end result is more durable concrete that is impermeable, more freeze-thaw damage resistant, more dust resistant, more abrasion resistant, less likely to have detrimental internal chemical reactions, and easier to keep clean. As a bonus vapor gas such as radon gas is forced to seek other avenues of escape instead of passing through the concrete because **AQURON<sup>®</sup> 2000 Cure & Seal<sup>™</sup>** creates a sub-surface membrane blanket consisting of uniform-size micropores and that is impermeable to all but the lightest harmless gases. **AQURON<sup>®</sup> 2000 Cure & Seal<sup>™</sup>** does many beneficial things to concrete while enhancing its bonding ability without impairing surface traction quality.

### SOME ATTRIBUTES

- Superior to water cure
- Hardens surface
- Stays pliable, allowing concrete to breathe
- Adds density and bonding strength
- Waterproofs
- Resists freeze/thaw spall off
- Increases thermal resistance
- Preserves imbedded steel
- Retards or halts alkali silica reactivity
- Non-toxic
- No VOC/VOS content
- Makes ice removal easier
- Clean equipment using only water
- Retards dusting and pitting
- Neutralizes internal corrosives

### APPLICABLE STANDARDS

**AQURON<sup>®</sup> 2000 Cure & Seal<sup>™</sup>** meets or exceeds the following standards for curing and sealing concrete:

- ASTM C-67 Section 10 Efflorescence
- ASTM C-666 Freeze-thaw resistance
- ASTM C-23-89 Artificial weathering
- ASTM C-666 Salt attack resistance
- AASHTO T260-89 Chloride ion content
- AASHTO T259-89 Chloride ion penetration
- ASTM D-56-91 Flash point (none)
- ASTM-D-1644-91 Non volatile
- ASTM-97-91 White pigmentation-reflectance
- ASTM-D-5084-91 Permeability
- ASTM-C-518 Thermal conductivity-resistance
- USDA approved for use in food processing areas
- EPA Compliant

### COMPOSITION

**AQURON<sup>®</sup> 2000 Cure & Seal<sup>™</sup>** is a highly reactive catalytic agent in water borne proprietary colloidal silicate base, which produces a silica-hydro gel below the surface and inside its matrix

## PHYSICAL PROPERTIES

Physical	liquid
Color	clear
Odor	none
Specific gravity	1.12±
Flash point	none
pH	12±
Toxicity	none
Boiling point	230°F/110°C
Freeze temperature	32°F/0°C
Hazardous vapors	none
Weight per gallon	9.32lbs/4.22kg
Environmentally	neutral
User	friendly
Shelf life	indefinite
Freeze harm	none (allow to thaw completely)
Surface bond quality	excellent
Flammability	none
VOC/VOS content	none
Resistance to UV	excellent
Paintable	yes
Pollutants	none
Waste disposal methods	Non-hazardous
Resistance to abrasion	excellent
Polymerization	excellent
Solids before application	nil
Solids after application	100%
R-Factor	increase up to 20
Recommended coverage	150 sq. ft. per US Gal/ 3.5m <sup>2</sup> per Liter

## INSTALLATION

### Job Conditions

- When temperatures are extremely hot the surface to which **AQURON® 2000 Cure & Seal™** is to be applied should be cooled with water for 72 hours following application. Surface cooling operation should commence only after surface sheen of the application of **AQURON® 2000 Cure & Seal™** has diminished.
- Caution should be taken in windy conditions as **AQURON® 2000 Cure & Seal™** if allowed to dry on glass can etch. **AQURON® 2000 Cure & Seal™** can dull shiny aluminum (if contact is made with glass or shiny aluminum rinse surface immediately with sufficient amounts of water before **AQURON® 2000 Cure & Seal™** has dried on surface).

### Application Procedure

- Apply **AQURON® 2000 CURE & SEAL** to concrete surface with a low pressure garden type sprayer with a fan spray tip (do not apply with brush or roller).
- Start application as soon as concrete has reached initial set or as soon as can be walked on without imprinting surface.
- AQURON® 2000 Cure & Seal™** should be applied at a rate not to exceed 150 sq. ft. per gal/3.5m<sup>2</sup> per liter. Normally to achieve this rate of application of **AQURON® 2000 Cure & Seal™**, two applications will be needed. Apply first application covering area in one direction, then apply second application (once first has penetrated surface, normally 10-60 min., do not allow to dry), in a direction 90° to the first, in result forming an even coverage

### Warranties and Limitations of Liability

Aquron Corporation ("Seller") warrants that if any goods supplied prove defective in workmanship or materials, that Seller shall replace them or refund their purchase price. Aquron Corporation offers a performance warranty for this **Aquron®** product. The warranty for the performance of this **Aquron®** product must be requested from the Aquron Corporation and initiated prior to applying this **Aquron®** product. Failure to initiate warranty of performance prior to application, holds harmless Aquron Corporation of any liability arising from its use, 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.

with this crisscross type pattern. Should the surface be dense steel troweled, use an airless sprayer and treat the concrete at 200 to 250 square feet per gallon

- If **AQURON® 2000 Cure & Seal™** white pigmentation is being utilized, product should be continually agitated to maintain pigment in solution.
- Start application holding spray tip approximately 8"12"/200mm-300mm from concrete surface, making application using overlapping spray pattern with a fanning motion at the end of each pass.
- Entire area being treated is to be saturated, but do not allow **AQURON® 2000 Cure & Seal™** to puddle, if so disperse puddled area with broom 15-30 minutes after application is completed (do not allow puddles of **AQURON® 2000 Cure & Seal™** to dry). Once forms are removed, treat exposed concrete.
- When temperatures are extremely hot, the surface to which **AQURON® 2000 Cure & Seal™** is to be applied may need to be cooled with water following application. Surface cooling operation should only commence after surface sheen of **AQURON® 2000 Cure & Seal™** application has diminished.

## CLEAN-UP AND SAFETY

No special clothing, breathing apparatus, goggles and gloves are necessary but in enclosed areas it is advisable to wear a simple dust mask to avoid possible irritation to breathing.

Attention should be made to watches, eyeglasses etc., as **AQURON® 2000 Cure & Seal™** can etch glass or discolor aluminum if allowed to dry.

Clean all equipment using water and mild soap. Never store spray equipment without cleaning and following manufacturer's recommendations for storage between usage.

## SHELF LIFE

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

## PACKAGING

**AQURON® 2000 Cure & Seal™** is available in 5 gallon/18.9 liters and 55 gallon/208.2 liters drum size.

**AQURON® 2000 Cure & Seal™** is also available in bulk containers.

## MAINTENANCE

Special maintenance of treated area is not required.

## PRECAUTIONS

- Spills or spray droplets in contact with glass should be removed immediately by flushing with water. DO NOT ALLOW TO DRY, as etching can occur.
- Some discoloration of aluminum can occur.
- Do not apply **AQURON® 2000 Cure & Seal™** when air and or substrate temperatures are less than 37°F/2.8°C and will not decrease to less than 37°F/2.8°C for 6 hours.

## TECHNICAL SERVICES

Technical information and assistance may be obtained from your local dealer, or by calling the technical department of the **AQURON Corporation** at (972) 722-5444, (800) 342-4649 Office, or (972) 722-6412 FAX or toll free FAX (888) 412-1543. E-mail welcome – info@aquron.com

### Local Area Representative