

ChemMasters

Installation Guidelines

Aquanil Plus is a solution of oligomeric alkylalkoxy siloxane in a petroleum solvent. It is formulated with a proprietary beading agent to enhance water resistance and a catalyst.

1.0 General

1.1 Scope

This specification covers the performance characteristics and application procedures for providing a solution of oligomeric alkylalkoxy siloxane in a petroleum solvent, formulated with a beading agent to enhance water resistance, and a catalyst.

1.2 Material Description

The solution of oligomeric alkylalkoxy siloxane in a petroleum solvent should be a high solids formulation for increased water and chloride ion repellency with a catalytic based reaction that insures maximum water repellency and service life

1.3 Typical Applications

- A. Exterior, horizontal, vertical or overhead concrete and masonry surfaces
- B. Poured in place or precast concrete, concrete block and brick
- C. Fired brick, natural and artificial stone, cement plaster and stucco, exposed aggregate
- D. Walls, walkways, patios, terraces, balconies, steps, porches
- E. Architectural and colored concrete

1.4 Limitations

- A. Aquanil Plus should not be applied to concrete or mortar less than 28 days old or if rain is expected within two hours. Apply to dry substrates only.
- B. Some natural and manufactured masonry products, particularly light colored units, contain minerals which may cause stains. A test area is always recommended. Stains should be apparent within 24-48 hours.
- B. Protect adjoining surfaces, shrubs, grass, etc., against dripping or overspray. If splashed upon glass surfaces, remove immediately with a cloth dampened with a strong solvent such as Polyseal Solvent. Wipe dry with a clean cloth. Do not apply if temperature is, or is expected to be less than 40° F/4° C. Not recommended for indoor use if fumes are objectionable.
- C. Aquanil Plus is a penetrating sealer designed to reduce the intrusion of water and salts. It is not a "waterproofing" membrane and thus cannot be expected to bridge cracks or joints in the concrete or mortar.

1.5 Quality Assurance

The repair contractor shall have experience and proficiency specific to the repair type and shall be approved by the engineer and the material supplier. The material supplier shall provide job service as required to assure proper handling and installation of materials. The field representative shall instruct as needed to assure that handling, mixing, placing and finishing of materials are in accordance with specifications.

1.6 Delivery, Storage and Handling

The product shall be delivered in the original, unopened containers. It shall be labeled with the manufacturer's name, product name and lot number. Materials should be stored at the job site under dry conditions and at a temperature of 40°F (4°C) to 90°F (32°C).

1.7 Environmental Requirements

All materials used for the repair work shall be VOC compliant. The manufacturer shall supply the appropriate material safety data sheets upon request.

1.8 Site Conditions

Coverage is dependent upon surface texture and porosity.

2.0 Materials

2.1 Approved Materials and Manufacturers

2.1.1 Product Standard

Aquanil Plus, as manufactured by ChemMasters, 300 Edwards Street, Madison, Ohio, 44057-3112, 1-800-486-7866, is considered to conform to the requirements of this specification and shall be the sealer used. Aquanil Plus is a solution of oligomeric alkylalkoxy siloxane in a petroleum solvent, formulated with a beading agent to enhance water resistance, and a catalyst.

2.1.2 Substitutions

No submittals for substitutions will be accepted after the bid date. All submittals must be made in writing to the engineer with supporting technical data sheets and test data showing complete equivalent performance.

2.2 Packaging/Coverage/Estimating

2.2.1 Packaging

Aquanil Plus is packaged in 5 U.S.gallon/18.9 Liter pails, shipped 36 per pallet shrink wrapped and 55 U.S.gallon/208 Liter drums, shipped 4 per pallet.

2.2.2 Coverage/Estimating:

A. Coverage depends upon the condition, porosity and density of the substrate.
Ft.²/gal M²/L

1. Poured in Place 125-200 3-5
2. Precast Concrete 125-200 3-5
3. Fired Brick 100-150 2.5-4
4. Stucco 60-110 1.5-4
5. Exposed Aggregate 100-150 2.5-4

2.2.3 Storage:

Store tightly sealed containers in cool, dry area away from direct sunlight and sources of heat. Shelf life of properly stored material is one year from date of manufacture.

2.3 Engineering Properties

The following engineering properties shall be typical of material performance when tested under laboratory conditions at 72°F (22.2°C).

2.3.1 Plastic Properties

2.3.1.1 Aquanil Plus has been tested for the following performance standards:
Test Control Aquanil Plus (%Reduction vs. Control)

- A. Weight Gain NCHRP 244 85.1%
- B. Chloride Ion Content NCHRP 244 92.1%
- C. Southern Exposure: 97.6%
- D. Scaling Resistance (ASTM C-672)—Passes Appearance: Clear

2.3.1.2 Drying Time:

- A. @ 70° F/21° C: 24 hours
- B. @50 °F/10 °C 48 hours

2.3.1.3 Nonvolatile: 10% by weight.

2.3.1.4 Flash Point: 105° F, 42 °C

2.4 Accessory Materials as manufactured by ChemMasters, 300 Edwards Street, Madison, Ohio, 44057-3112, 1-800-486-7866, is considered to conform to the requirements of this specification.

3.0 Execution

3.1 References

- A. Refer to ChemMasters MSDS and Technical Data Sheets

3.2 Surface Preparation

A. Any restoration or repair of the substrate should be the first step in a complete sealing project.

B. Any new concrete must be allowed to cure for at least 28 days before application of Aquanil Plus.

C. The surface to be sealed should be thoroughly cleaned to the desired final appearance removing any stains, efflorescence, foreign matter and loose mortar.

D. A pressure wash cleaning is recommended.

E. Apply the Aquanil Plus with a roller or low pressure airless spray. Flood on the surface to the point of saturation, as indicated by a run down of 6-12 inches.

Generally, for best results on vertical substrates, application should be done from the bottom, proceeding upward.

3.3 Clean-up

Clean tools and equipment used in applying Aquanil Plus may be cleaned with Polyseal Solvent, mineral spirits or xylene.