

SECTION 07 19 00  
CONCRETE SEALER

This guide specification has been prepared by Eco-Wares/Envirosafe Mfg., in printed and electronic media, as an aid to specifiers in preparing written construction documents for Concrete Sealers. Eco-Wares/Envirosafe Mfg. is a leader and innovator in the construction industry and specializes in providing environmentally safe residential, commercial and industrial building and maintenance supplies.

Edit entire master to suit project requirements. Modify or add items as necessary. Delete items which are not applicable. Words and sentences within brackets [ ] reflect a choice to be made regarding inclusion or exclusion of a particular item or statement. This section may include performance, proprietary and descriptive type specifications. Edit to avoid conflicting requirements. Editor notes to guide the specifiers are included between lines of asterisks to assist in choices to be made. Remove these notes before final printing of specification.

This guide specification is written around the Construction Specifications Institute (CSI) Section Format standards.

For specification assistance on specific product applications, please contact our offices.

Manufacturer reserves the right to modify these guide specifications at any time. Updates for this guide specification will be posted on the web site and/or in printed matter as they occur. The company makes no expressed or implied warranties regarding content, errors, or omissions in the information presented.

## PART 1 - GENERAL

### 1.1 SUMMARY

#### A. Section Includes:

1. Water repellent sealer for concrete surfaces as scheduled.

#### B. Related Sections:

1. Section 04 20 00 – Unit Masonry
2. Section 07 10 00 – Damp Proofing and Waterproofing
3. Section 07 16 13 – Polymer Modified Waterproofing
4. Section 09 93 00 – Staining and Transparent Finishing

### 1.2 REFERENCE STANDARDS

- A. ASTM 413 - “Water Absorption of Chemical Resistant Concrete/Masonry”
- B. ASTM C140 - “Masonry Absorption Test for Light Weight Block”. ASTM requires that water absorption cannot exceed 1% after 2 days of immersion.
- C. ASTM 123D - “Penetration Test for Nuclear Power Plant, 8000 psi Concrete Pour”

- D. ASTM 642-82 - "Masonry Absorption Test for Brick".
- E. ASTM C672 - "Scaling Resistance".
- F. AS 1012.21-1999 - "Water Absorption of Hardened Concrete".
- G. NCHRP 244 – Cube Test – "Accelerated Weathering Test". Standard of not exceeding 25% of untreated cube absorbed chloride.
- H. NCHRP 244 – Southern Exposure – "Chloride Ion Penetration Test". Product did not allow chloride penetration and thus passed absorbed chloride requirements not to exceed 10% of untreated concrete.
- I. Blue Dye Test - "Blue Dye Absorption Test".

### 1.3 SUBMITTALS

- A. Comply with Section [01 33 00] [\_\_ \_\_ \_\_].
- B. Product Data: Submit manufacturer's technical data sheets and LEED product information for each product.
  - 1. LEED, IEQ Credit 3.1 – Construction Indoor Air Quality Management Plan.
  - 2. LEED, IEQ Credit 4.0 – Low Emitting Materials
- C. Submit list of project references as documented in this Specification under Quality Assurance Article. Include contact name and phone number of person charged with oversight of each project.
- D. Quality Control Submittals:
  - 1. Provide protection plan of surrounding areas and non-work surfaces.

### 1.4 QUALITY ASSURANCE

- A. Comply with Section [01 40 00] [\_\_ \_\_ \_\_].
- B. Qualifications:
  - 1. Manufacturer Qualifications: Company with minimum [ ] years of experience in manufacturing of specified products.
  - 2. Applicator Qualifications: Company with minimum of [ ] years of experience in application of specified products on projects of similar size and scope, and is acceptable to product manufacturer.
    - a. Successful completion of a minimum of projects of similar size and complexity to specified Work.
- C. Field Sample:
  - 1. If required, install at Project site or pre-selected area of building an area for field sample, as directed by Architect.
    - a. Apply material in accordance with manufacturer's written application instructions.

2. Manufacturer's representative or designated representative will review technical aspects; surface preparation, application, and workmanship.
3. Field sample will be standard for judging workmanship on remainder of Project.
4. Maintain field sample during construction for workmanship comparison.
5. Do not alter, move, or destroy field sample until Work is completed and approved by Architect.
6. Obtain Architect's written approval of field sample before start of material application, including approval of aesthetics, color, texture, and appearance.

#### 1.5 DELIVERY, STORAGE, AND HANDLING

- A. Comply with Section [01 60 00] [\_\_ \_\_ \_\_].
- B. Comply with manufacturer's ordering instructions and lead-time requirements to avoid construction delays.
- C. Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.
- D. Store in unopened containers in clean, dry area between 40 and 90 degrees F and out of direct sunlight.

#### 1.6 WARRANTY

- A. See section 01 78 00 - closeout submittals, for additional warranty requirements.
- B. Provide manufacturer's standard 15 year warranty protection from the date of application from the original purchaser.

### PART 2 - PRODUCTS

#### 2.1 MANUFACTURERS

- A. Subject to compliance with requirements, provide products from the following manufacturer:  
Eco-Wares/Envirosafe Mfg. 7634-B Progress Circle, West Melbourne, FL. 32904  
Service: 866- 874-8070  
Internet: www.eco-wares.com
- B. Substitutions: Comply with Section [01 60 00] [\_\_ \_\_ \_\_].
- C. Specifications and Drawings are based on manufacturer's proprietary literature from Eco-Wares/Envirosafe Mfg. Other manufacturers shall comply with minimum levels of material and detailing indicated in Specifications or on Drawings. Architect will be sole judge of appropriateness of substitutions.

#### 2.2 MATERIALS

- A. High-performance, penetrating water dispersed polyester polymer and water-borne polyurethane that when dry, fills the voids and coats the interior particles of the matrix on

concrete surfaces preventing damage from freeze/thaw cycles. Safe for indoor or exterior use.

1. Acceptable Product: Trojan Masonry & Concrete Sealer

B. Sealer shall have the following minimum performance:

1. Flash Point: non-flammable
2. State: Liquid
3. Color: Translucent – No color
4. Vapor Pressure: (Air + 1) - N/A
5. Solubility in Water: Dilutable
6. Boiling Point: 100 degrees Celsius / 212 degrees Fahrenheit
7. Freezing Point: 0 degrees Celsius / 32 degrees Fahrenheit Water
8. Specific Gravity: (Water=1) - 1.10 @ 20 degrees Celsius
9. Evaporation Rate: (BAC=1) - Same as Water
10. Percent Solids by Weight: 10.5%
11. pH: 6.8
12. Volatile Organic Compounds: 5.9 g/L
13. Freeze Thaw Resistance: Improved verifiable resistance under test conditions.

C. Low Gloss Finish Sealer: High-performance, penetrating water dispersed polyester polymer and water-borne polyurethane that when dry, fills the voids and coats the interior particles of the matrix on concrete surfaces with acrylic added to the formula that settles on the surface to provide a low gloss sheen. Safe for indoor or exterior use.

1. Acceptable Product: Trojan Ultra Masonry Sealer

D. Sealer shall have the following minimum performance:

1. Flash Point: non-flammable
2. State: Liquid
3. Color: Milky in container. Dries with a clear low gloss, satin finish
4. Vapor Pressure: (Air + 1) - N/A
5. Solubility in Water: Dilutable
6. Boiling Point: 100 degrees Celsius / 212 degrees Fahrenheit
7. Freezing Point: 0 degrees Celsius / 32 degrees Fahrenheit (Water)
8. Specific Gravity: (Water=1) - 1.10 @ 20 degrees Celsius
9. Evaporation Rate: (BAC=1) - Same as Water
10. Percent Solids by Weight: 29%
11. pH: 6.8
12. Volatile Organic Compounds: 54.5g/L
13. Freeze Thaw Resistance: Improved verifiable resistance under test conditions.

E. Color Sealer: High-performance, penetrating water dispersed polyester polymer and water-borne polyurethane that when dry, fills the voids and coats the interior particles of the matrix. Includes UV resistant color stain applied to any porous surface including, concrete surfaces and pavers. Safe for indoor or exterior use.

1. Acceptable Product: Trojan Color Sealer

2. Color Selection: [As selected by Architect from manufacturer's full range] <Insert color>.

F. Sealer shall have the following minimum performance:

1. Flash Point: non-flammable
2. State: Liquid
3. Appearance: Colored liquid (various)
4. Vapor Pressure: (Air + 1) - N/A
5. Solubility in Water: Infinite
6. Boiling Point: 100 degrees Celsius / 212 degrees Fahrenheit
7. Freezing Point: 0 degrees Celsius / 32 degrees Fahrenheit Water
8. Specific Gravity: (Water =1) - 1.10
9. pH: 6.8
10. Volatile Organic Compounds: 5.9 g/L
11. Percent Solids by Weight: 12% - 19% (Varies by color and finish)
12. Freeze Thaw Resistance: Improved verifiable resistance under test conditions.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Comply with Section [01 70 00] [\_\_ \_\_ \_\_].

### 3.2 SURFACE PREPARATION

- A. Prepare surfaces in accordance with manufacturer's instructions.
- B. Surfaces shall be clean. Remove dust, dirt, oil, grease, chemical films, coatings and other contaminants before application.
- C. If surface does NOT absorb water, then there is possibly another sealer applied to the surface and sealer should not be applied.
- D. Exterior Surfaces: In all cleaning cases rinse well using 3000 psi pressure washer and allow to dry thoroughly before application.
- E. Interior Surfaces: use a wet vacuum to remove excess water.

### 3.3 APPLICATION

- A. Apply sealer in accordance with manufacturer's instructions.
- B. Stir material thoroughly before and during application.
- C. Back-roll to even out the material and to remove any puddles in low spots.
- D. On some historic, old and extremely porous surfaces a second coat of either plain Trojan or Trojan Color may need to be applied to completely seal the surface.
- E. Surface minimum temperature must be above 45 degrees F before application.

- F. Allow to dry thoroughly before traffic is allowed onto floor.
- G. Trojan Masonry & Concrete Sealer: To paint over a Trojan treated area use only a good quality acrylic, oil-base, epoxy or urethane paint. Do not use latex paint over a Trojan coated surface since latex paint makes a weak bond especially in exterior applications. On new Concrete, Let dry and cure for 21-28 days depending on temperature and humidity.
- H. Trojan Color Sealer: should not be applied to a hot surface in the sun. Flash drying will occur and the affect will be uneven color with overlap marks. Always maintain a 'wet edge' when applying this product. On new concrete, (under 2 years of age), a pH reading should be taken before starting application to be sure that the pH is between 6 & 8. If it is not, then Enviro Etch should be applied to the surface. Rinse and allow to dry and re-take the pH reading.
  - 1. All interior surfaces must use Enviro Etch first to allow for adequate and even absorption of the Trojan Color Sealer.
  - 2. Apply Trojan Color Sealer with a low-pressure sprayer. Trojan Color Sealer should be applied liberally to allow the surface to drink as much as possible without leaving puddles.

#### 3.4 SAFETY

- A. Safe storage, handling and use dictate that adequate health and safety precautions be observed with this product. User is specifically directed to consult the current Material Safety Data Sheet for this product as well as precautions contained on product labeling.

#### 3.5 PROTECTION

- A. Protect sealer from damage during construction.

END OF SECTION