

Paragraph Specification: Please use the below specification language for projects requiring specifications directly on drawings.

1. Concrete Surface Treatment / Finishing Aid: Spray-applied DAY1 Concrete Surface Technology for lubricating surface during finishing operations by Solomon Colors. Single component colloidal silica-based treatment for improving surface properties, including that of decorative or colored concrete. DAY1 also improves workability of high-performance concretes that include water reducers, fly-ash, slag, or other SCMs. Allows for near surface, workability in hot, cold, dry, windy, and adverse conditions that are unfavorable to concrete finishing. Apply material in accordance with manufacturers written requirements using the following spread rates:
 - A. Exterior Performance: 250 to 500 square feet per gallon
 - B. Interior Performance: 250 to 500 square feet per gallon
 - C. Finishing Aid Only: 750 to 1000 square feet per gallon
 - 1) ASTM C672 Scaling Resistance: 70% improvement, 50 cycles
 - 2) ASTM C666 Freezing and Thawing: 85% resistance improvement
 - 3) ASTM C779 Abrasion Resistance: 35% improvement
 - 4) AASHTO T 259/260 Chloride Ion Penetration: 95% resistant

SECTION 03 35 00

CONCRETE FINISHING AID

PART 1 GENERAL

1.1 RELATED DOUCMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SECTION INCLUDES

- A. Spray-applied surface treatment / finishing aid to improve properties of interior and exterior concrete finishing.
- B. Related Sections:
 1. Division 01: Administrative, procedural, and temporary work requirements.

1.3 REFERENCES

- A. ASTM International:
 1. C672 - Standard Test Method for Scaling Resistance of Concrete Surfaces Exposed to Deicing Chemicals
 2. C666 - Standard Test Method for Resistance of Concrete to Rapid Freezing and Thawing
 3. C779 - Standard Test Method for Abrasion Resistance of Horizontal Concrete Surfaces
 4. National Sanitation Foundation NSF61 approved for drinking water systems
- B. American Association of State Highway and Transportation Officials

1. T259 – Standard Method of Test for Resistance of Concrete to Chloride Ion Penetration
- C. NSF/ANSI 61: Drinking Water System Components
1. NSF61 approved component for drinking water systems

1.1 SUBMITTALS

- A. Submittals for Review:
1. Product Data: Manufacturer's technical data.

B. Sustainable Design Submittals:

1. Low-Emitting Product

C. Sustainable Design Submittals:

1. Health Product Declaration

1.2 QUALITY ASSURANCE

A. Manufacturer Qualifications:

1. Minimum of five (5) years documented experience producing colloidal silica concrete materials.

1.3 PROJECT CONDITIONS

- A. Apply when temperatures are a minimum of 40°F and a maximum 110°F for 24 hours prior to, during and after application.
- B. Do not allow material to freeze prior to application.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturers:

1. DAY1 Concrete Surface Technology by Solomon Colors (www.solomoncolors.com)

B. Substitutions: **Under provisions of Division 01.] [Not permitted.] [No Known Equal]**

2.2 MATERIALS

- A. Concrete Surface Treatment / Finishing Aid: Spray-applied DAY1 Concrete Surface Technology for lubricating surface during finishing operations by Solomon Colors. Single component colloidal silica-based treatment for improving surface properties, including that of decorative or colored concrete. DAY1 also improves workability of high-performance concretes that include water reducers, fly-ash, slag, or other SCMs. Allows for near surface, workability in hot, cold, dry, windy, and adverse conditions that are unfavorable to concrete finishing.

1. Specified Product: DAY1 Concrete Surface Technology by Solomon Colors
 - a. Material Type: Water-based, colloidal silica blended surfactant
 - b. VOC Content: < 50 grams per liter (category)
 - c. pH Level: Maximum of 10.5pH and non-hazardous waste per EPA.
 - d. Scaling Resistance: 70% improvement, 50 cycles, ASTM C672
 - e. Freeze Thaw: 85% resistance improvement, ASTM C666

- f. Abrasion Resistance: 35% improvement, ASTM C779
- g. Chloride Ion Penetration: 95% resistant, AASHTO T 259/260

2.3 EQUIPMENT

- A. Equipment: Manufacturer recommended air-less sprayer meeting a maximum of 0.5 gallon per minute flow rate and operating pressure of up to 60 psi

PART 3 EXECUTION

3.1 PREPARATION

- A. Pour and place concrete to required levelness and thickness requirements.
- B. Determine square footage of surfaces to be finished and verify proper material quantities have been delivered to site.

3.3 INSTALLATION

- A. Spray-apply directly to concrete surface during finishing process in accordance with manufacturers recommendations and the following:
 - 1. Interior Performance: 250 to 500 square feet per gallon
 - 2. Exterior Performance: 250 to 500 square feet per gallon
 - 3. Finishing Aid Only: 750 to 1000 square feet per gallon
- B. Maintain uniform coverage to provide manufacturer published performance properties.

3.4 FIELD QUALITY CONTROL

- A. Prevent overspray of material to adjacent equipment and construction materials.

3.5 PROTECTION

- A. Close areas to traffic until concrete has cured to allow walking foot traffic without marring surface.

END OF SECTION