

# Technical Information Sheet: Surface Deactivator

Rev: TIS-CRP-SD-2013-06

CONTRAZZO  
RetroPave

\*Issued June, 2013. Subject to change. Contact Solomon/Brickform for most up-to-date information

SPECIFICATION: Section 03 35 00 Concrete Finishing

## 001: PRODUCT DESCRIPTION

**Surface Deactivator** by Solomon Colors makes exposed aggregate finishes easier and more consistent. It is typically applied to freshly-placed concrete to prevent cement paste hardening and achieve more controlled exposed aggregate finishes. Unlike sugar-based retarders with uncertain levels of retardation, **Surface Deactivator** selectively halts the hydration process down to a controlled depth. Ten predetermined depths of exposure are available, color-coded for identification, to provide consistent, repeatable cement paste removal and aggregate reveal. Because **Surface Deactivator** provides a longer window before the surface paste must be removed, it allows underlying concrete to harden properly, locking in aggregate and reducing pop-outs. **Surface Deactivator** is water-soluble for easy removal with high pressure water washing and scrubbing equipment.

**Surface Deactivator** creates a polymeric-film that acts as a water retention barrier and temporary curing agent, protecting fresh concrete from light rain and reducing moisture loss.

**Surface Deactivator** can be applied to newly-placed concrete that is specified for diamond polishing. It softens surface cement paste, reducing heavy grinding stages up to 75% and dramatically decreasing polishing time as well as diamond-tooling and labor costs.

## 002: FEATURES & ADVANTAGES

**Surface Deactivator** offers many features and advantages over simple surface retarders.

- ◇ Controlled, repeatable exposure depth
- ◇ Available in 10 predetermined depths
- ◇ Exposure depths numbered and color coded
- ◇ Extended exposure time and reliability
- ◇ High performance coverage rate
- ◇ Vibrant visual coverage control, non-staining
- ◇ Performs in hot and cold conditions
- ◇ Film forming and quick drying
- ◇ Polymer film reduces moisture loss
- ◇ Protects fresh concrete against light rain
- ◇ Solvent-free, water-soluble
- ◇ VOC Compliant

## 003: MATERIALS PACKAGING & EXPOSURE DEPTHS

**Surface Deactivator** is shipped as a ready-to-use liquid, available in 1 gallon (3.8 L) containers and 5 gallon (18.9 L) pails in

Traditionally the correct level of exposure is to reveal one third of the maximum size aggregate. Following these guidelines will minimize the potential for aggregate pop-outs. New technologies have allowed for a more controlled level of exposure and micro etches. Therefore all the Surface Deactivator depths that are one third or less can be used for specialist finishes.

Exposure Depths: & Aggregate Sizes:

Product #	Color Code	Exposure Depth	Aggregate Size
SSD-02	Purple	Acid Etch	Acid Etch
SSD-05	Blue	Light Sandblast	Light Sandblast
SSD-10	Brown	Medium Sandblast	Up to 1/4"
SSD-20	Green	Heavy Sandblast	1/8" - 1/4"
SSD-25	Yellow	Exposure	1/8" - 3/8"
SSD-30	Red	Exposure	1/8" - 3/8"
SSD-40	Gray	Exposure	3/8" - 1/2"
SSD-50	Mustard	Exposure	3/8" - 5/8"
SSD-55	White	Exposure	3/8" - 5/8"
SSD-65	Orange	Exposure	5/8" - 1"

**\*Important:** Exposure depth based on a 6 sack (564lbs/cu.yd or 350kg/m<sup>3</sup>) concrete mix-design. Mixes with higher or lower cement content may yield alternative exposures. Jobsite samples are recommended.

\*See Section 007: Project Testing.

## 004: COVERAGE RATES

Coverage rates may vary depending on the type of sprayer and the surface texture of the concrete. Typical coverage rates are 300 - 400 sf/gallon

\*Average sf/gal (m<sup>2</sup>/gal) by type of sprayer, concrete texture and finish.

\*Coverage Chart Page 2



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## COVERAGE CHART & SPRAYER TYPE

Placement Finish	200 - 250 sf	250 - 300 sf	350 - 400 sf	400 - 450 sf
	18 - 23m <sup>2</sup>	23 - 28m <sup>2</sup>	33 - 38m <sup>2</sup>	38 - 42m <sup>2</sup>
Floated Surface	200 - 250 sf	250 - 300 sf	350 - 400 sf	400 - 450 sf
	18 - 23m <sup>2</sup>	23 - 28m <sup>2</sup>	33 - 38m <sup>2</sup>	38 - 42m <sup>2</sup>
Wet Trowel	200 - 250 sf	250 - 300 sf	350 - 400 sf	450 - 500 sf
	18 - 23m <sup>2</sup>	23 - 28m <sup>2</sup>	33 - 38m <sup>2</sup>	42 - 48m <sup>2</sup>
Light Trowel	200 - 250 sf	300 - 350 sf	400 - 450 sf	500 - 550 sf
	18 - 23m <sup>2</sup>	28 - 33m <sup>2</sup>	38 - 42m <sup>2</sup>	48 - 53m <sup>2</sup>
Hard Trowel	200 - 250 sf	300 - 350 sf	400 - 450 sf	500 - 550 sf
	18 - 23m <sup>2</sup>	28 - 33m <sup>2</sup>	38 - 42m <sup>2</sup>	48 - 53m <sup>2</sup>
	Pump Sprayer	Auto Pump Sprayer	Manual HVLP	Automatic HVLP

**\*Important:** Evaluation of the type of sprayer and method of application need to be determined during jobsite sample. See Section 007: Project Testing

### 005: SAFETY PRECAUTIONS

**WARNING: FOR PROFESSIONAL USE ONLY.** BEFORE USING PRODUCT, READ MATERIAL SAFETY DATA SHEET (MSDS) AND INSTRUCTIONS ON PACKAGING. ACIDIC LIQUID: CONTACT CAN DAMAGE EYES, SKIN AND OTHER BODY TISSUES. HANDLE WITH CARE. EYE AND SKIN IRRITANT. DIGESTIVE TRACT IRRITANT; DO NOT TAKE INTERNALLY. KEEP OUT OF REACH OF CHILDREN. SPRAY MIST IS RESPIRATORY TRACT IRRITANT. USE ONLY WITH ADEQUATE VENTILATION. Do not breathe vapors or spray mist. Avoid contact with eyes, skin, clothing. Observe appropriate safety and jobsite controls. Wear appropriate protection including eye protection and chemical-resistant gloves. Ensure fresh air-flow during application and until dry. If you experience headaches, dizziness, eye watering, or if air monitoring shows vapor/mist levels above applicable limits, wear a properly fitted P100/organic vapor respirator (NIOSH TC-84A approved), used according to manufacturer's directions, during application and drying.

### 006: EQUIPMENT

**Surface Deactivator** can be applied with most sprayer types. Sprayer selection will affect the overall coverage rates. The most economical sprayer is an automatic high volume low pressure (HVLP) sprayer. *\*See section 004: Coverage Rates*

### 007: PROJECT TESTING

To assure that performance and desired appearance are achieved, a test sample is recommended. Use the proposed treatment methods and techniques, coverage rates, and equipment. Where possible use the same personnel to produce the

sample who will be present during the project. Test section should be large enough to properly represent the overall slab.

### 008: APPLICATION GUIDELINES

**Surface Deactivator** is applied as soon as possible during the placement and finishing of the concrete. **Surface Deactivator** will only stop hydration of the surface from the time of application forward. If the concrete begins setting before **Surface Deactivator** is applied, it cannot reverse setting that has already taken place. This is why a representative job-site sample is important. *\*See section 007: Project Testing.*

- 1 - Agitate **Surface Deactivator** before pouring into sprayer.
- 2 - Pour **Surface Deactivator** into sprayer. Keep the sprayer at optimized levels to enable even distribution.
- 3 - Spray apply to concrete holding the sprayer tip 12-14" (30-60 cm) above the concrete surface.
- 4 - Make sure the surface has uniform coverage as determined in the approved job-site sample. *\*See section 004: Coverage Rates & 007: Project Testing*

**IMPORTANT NOTES:** Concrete admixtures that affect set times could alter the performance of **Surface Deactivator** and should be included in job-site samples to assess overall workability and performance. *\*See section 007: Project Testing.*

Concrete slabs treated with **Surface Deactivator** do not need to be covered with plastic or wet-burlap in most cases. During extreme hot, windy or cold weather conditions, covering the slab may be beneficial to maintain moisture consistency at the surface of the concrete.

DO NOT apply CURING AGENTS over **Surface Deactivator**. The unique characteristics of **Surface Deactivator** create a polymeric-film that acts as a water retention barrier and temporary curing agent until washed off and a cure/seal applied.

### 009: REMOVAL GUIDELINES

**Surface Deactivator** prevents the surface layer of the concrete from hardening. When the underlying concrete has attained sufficient hardness, surface cement paste is removed down to the desired depth.

**Surface Deactivator** offers an extended window for paste removal when compared to traditional surface retarders. Washing can be performed anytime from the same day of application to several days later, dependent upon local weather conditions and concrete mix. Timing and removal should be determined during the project testing and job-site samples. *\*See Section 007: Project Testing.*

There are several methods for paste removal, depending on equipment choices and project specifics.

### Exposed Aggregate Surface Removal:

- ◇ Running water and stiff broom sweeping
- ◇ High pressure washing
- ◇ Running water and rotary buffer with bristle attachment
- ◇ High pressure washing and rotary buffer with bristle attachment

### Grinding Surface Removal:

- ◇ Select diamond tooling to remove surface by grinding, collecting the dust through a vacuum system

### Shot-blasting Surface Removal:

- ◇ Light shot-blasting with dust collection system.

**NOTE:** Consult with the equipment and tooling manufacturers for best results when grinding, polishing or shot-blasting concrete.

**IMPORTANT NOTES:** When washing the surface to expose aggregate, it is important to dispose of the slurry in accordance with EPA and individual state environmental regulations. Containment and waste management is the responsibility of the company contracted for the concrete work.

### 010: NEXT STEPS

When concrete polishing, proceed to grinding and polishing process. For exposed aggregate finishes, an appropriate concrete sealer may be applied. Consult your Solomon/Brickform distributor for sealer options.

### 011: PHYSICAL PROPERTIES

- Physical State ..... (Liquid)
- Color ..... (Individually Color Coded)
- VOC Content.....(0 g/l – VOC free)
- Material pH .....(apx 2-4)
- Freeze point ..... (32°F - 0°C)
- Shelf Life .....(18 Months)

### 012: STORAGE & SHELF LIFE

**Surface Deactivator** should be kept in the original container when possible, with the lid fastened tightly. **Surface Deactivator** has an optimized shelf life of 18 months from the date of manufacture. This date is available on the batch reference number on the original container.

Keep in a cool, dry place raised off the floor. Keep in temperature range of 40–100°F or 4–38°C.

**\*Important: Do Not Allow to Freeze**

### 013: WARRANTY

**Surface Deactivator** is intended for use by licensed contractors and installers, experienced and trained in the use of these types of products. It is warranted to be of uniform quality, within manufacturing tolerances. The manufacturer has no control over the use of this product, therefore, no warranty, expressed or implied, is or can be made either as to the effects or results of such use. In any case, the manufacturer’s obligations shall be limited to refunding the purchase price or replacing **Surface Deactivator** proven defective. The end user shall be responsible for determining product’s suitability and assumes all risks and liability.

### 014: FIRST AID

**Ingestion:** Rinse mouth immediately and drink large quantities of water. In all cases of doubt, or when symptoms persist, seek medical advice.

**Inhalation:** Remove victim to fresh air and keep warm and at rest. In all cases of doubt, or when symptoms persist, seek medical advice.

**Eye Contact:** Flush with plenty of water for at least 15 minutes, holding eyelids open. Seek medical attention.

**Skin Contact:** Wash affected area immediately with soap and water. Remove contaminated clothing and shoes.