

## TECHNICAL DATA BULLETIN

### OKON S-40™

#### PENETRATING WATER REPELLENT SEALER FOR VERTICAL OR HORIZONTAL CONCRETE AND MASONRY

OKON S-40 is a water-based, oligomeric siloxane/silane, ready to use, deep penetrating water-repellent. It is a colorless, odorless, non-staining, non-yellowing and non-film forming penetrant used to protect concrete or masonry surfaces without altering the appearance or texture of the treated surface. OKON S-40 is breathable, nonflammable and complies with VOC regulations.

It is designed for vertical surfaces - light weight concrete, normal weight concrete block and mortar joints, porous brick, precast, pre-stressed, poured-in-place, exposed aggregate, and air entrained concrete and horizontal slabs – above grade concrete wearing surfaces.

Applications include exterior walls, sound barriers, sidewalks, ramps, parking decks, bridge decks and industrial floors.

#### APPLICATIONS – Horizontal and vertical surfaces

- Concrete
- Normal Weight Concrete block (Heavy & dense)
- Lightweight concrete
- Porous Brick
- Mortar joints

#### FEATURES

1. Ready-to-use waterbase, breathable
2. VOC Compliant (all jurisdictions)
3. Colorless, odorless, non-yellowing
4. Non-glossy, will not alter texture or appearance of treated surface
5. Paintable
6. Resists high alkalinity
7. Resists chloride salts

#### TECHNICAL DATA (@ 75° F, 50% RH)

- Chemistry Silane/siloxane
- Weight/gallon 8.4 lbs per gallon
- Color Colorless
- Product type Water-base
- VOC < 50 g/L
- Specific gravity 1.01
- Depth of Penetration 3/8"  
(Substrate dependent)
- Absorption Reduction, %  
Fed. Spec. SS-W-110C, % 88
- Reduction in water leakage (ASTM E514-90)
  - Brick 100%
  - Mortar block >91%
- Accelerated weathering (1500 hrs.) No change
- Flash point > 200 F
- Application temperature 45° to 90° F
- Viscosity < 50 cps
- Paintable (ASTM D 3359) Yes

Values presented are typical and are not necessarily referenced to create specifications.

#### OKON S-40 meets NCHRP 244 and SS W110C specifications NCHRP Report No. 244

##### Reduction in Chloride Ion Content, %

1 day	80
5 days	82
21 days	84
Average	82
Min. Required	75

##### Reduction in Weight Gain, %

1 day	79
5 days	81
21 days	85

#### SURFACE PREPARATION

OKON S-40 can be applied to porous surfaces that are unsealed, clean (free of dirt, waxes and oils), dry and sound. New concrete must be cured for 21 days prior to coating. Cracks and joints must be sealed prior to application. **Unsealed:** S-40 must be able to penetrate the surface. Test the openness of the substrate by sprinkling with water. If the surface turns dark with the water S-40 can be applied. **Clean:** Clean exterior surfaces by pressure washing to remove dust, mildew, sand or other foreign matter. Vacuum and damp-mop interior surfaces. Remove efflorescence with suflamic or dilute muriatic acid. If acid is used, it must be completely neutralized before applying S-40. Rinse the surface thoroughly after chemical cleaning. Use a degreaser to remove oil or grease stains. **Dry:** A dry substrate is required to achieve proper penetration. Allow washed surfaces to dry three days prior to coating. Surfaces should be dry 24 hours prior to application. In climates where freezing temperatures have existed prior to application, allow adequate time for surfaces to thaw. Do not apply if ambient air or surface temperatures are below 45° or over 90° F. Do not apply if rain is expected within 12 hours. **Sound:** Surface of concrete and mortar joints must be hard and firm - not loose or sandy. The surface is unsound if it can be scraped or gouged with a flat screw driver. Unsound mortar or deteriorated concrete should be removed and repaired prior to coating. Prior to application, joints or cracks must be properly sealed or filled. Parapet walls must be capped and backside sealed with a waterproofing membrane. Protect adjacent and underlying surfaces from over spray and rundown.

#### COVERAGE

One saturation coat is normally sufficient for vertical smooth concrete or masonry. For textured or horizontal surfaces a second coat may be required. A second coat can only be applied while the first coat is still damp.

The following coverage rates are approximate and for estimating purposes only. The surface texture and style of mortar joints can greatly affect application rates. Always apply material to test area prior to general application to establish spread rate.

## APPLICATION COVERAGE

Sq. Ft. / Gallon	Vertical	Horizontal
1 <sup>st</sup> Coat	40 – 60	100-150
2 <sup>nd</sup> Coat	60 – 100	100-150 *

\* Not required on dense surfaces

## APPLICATION

OKON S-40 is ready-to-use and should not be diluted. Agitate before use. Avoid application in windy weather. In hot weather, where possible, lightly spray surface with water to cool the surface to prevent flash drying. S-40 is best applied by low-pressure airless spray but can be applied by garden-type sprayer or small areas can be applied by brush or roller. For airless spray, reduce pressure to 500 psi and use a large tip - .035 - .050" tip. Hold spray tip 12-18 inches from the surface, start at the bottom of the wall and work up with an overlapping horizontal spray pattern to ensure run down of 6 – 8 inches. Take special care to saturate mortar joints. Do not stop or interrupt the application in the middle of the wall. Stop application only at expansion joints, walls or breaks defined with masking. Uneven application may result in blotchy appearance. Water repellency properties will develop 24 hours to 5 days after application.

**Horizontal Surfaces:** OKON S-40 can be used to provide water repellency to horizontal concrete floors or pads. Apply by roller, garden-sprayer or low-pressure airless. Do not pour product onto horizontal surfaces to spread. Apply sufficient material so that surface remains wet for several minutes before material is absorbed. After 5-10 minutes, back-roll remaining pools or puddles with dry-roller to prevent excess material from drying on the surface. Material that is not absorbed should be back rolled or brushed out to avoid build up. A second coat may be applied to maximize protection while the first coat is still damp.

Protect shrubbery, plants, and grass, glass, metal and asphalt surfaces during application.

**CLEAN-UP:** Clean drips, runs and over-spray residue while still wet, using detergent and water. S-40 will not etch common glass but spills and over spray onto glass should be removed with a damp cloth while wet. Dried material may require mechanical abrasion to remove. Clean application and spray equipment with detergent and water immediately following use.

**LIMITATIONS:** OKON S-40 does not provide protection against hydrostatic water pressure, efflorescence caused by interior moisture sources, or moisture penetration through cracks in mortar, expansion joints or junctures between dissimilar materials. S-40 will not fill large pores, bridge cracks, seal inaccessible areas, or compensate for flawed construction. Do not use on glazed or sealed surfaces. Do not tint. A mock-up should always be performed and approved by property owner. To protect more porous substrates when RILEM tube test standards are required use OKON PLUGGER. Refer to Technical Data Bulletin for detailed use instructions.

APPLICATION PARAMETERS	
Surface Temperature	45° F – 90° F
Relative Humidity	< 85%
Protect from rain	12 hours
DRY TIME	
Dry time to recoat	Wet-on-wet, if required
Dry time for foot traffic	4 hours
Dry time for vehicular traffic	24 hours
Dry time based on 70°F & 50% RH. Lower temperatures and higher humidity will increase dry time. Air circulation will aid drying.	

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Effective April, 2006

## PACKAGING CODES

Code	Package	Wtg.	UPC
OK641	Gallon	9.0	7 49505 64001 3
OK640	Five	44.0	7 49505 64005 1

**SHELF LIFE: 12 months unopened in protected storage. Product returns 6 months after purchase date will not be accepted.**

## FIRST AID/SAFETY INSTRUCTIONS:

**EYES: Avoid splashing into eyes or contact with skin.** In case of eye contact, flood eyes repeatedly with water and call a physician as needed. DO NOT RUB EYES! Avoid breathing vapors or mist. Wash hands thoroughly after handling, and before smoking or eating. Do not take internally. **KEEP AWAY FROM CHILDREN AND ANIMALS.** Protect shrubbery, plants, and grass, glass, metal and asphalt surfaces during application.

## 5-YEAR WATER REPELLENCY WARRANTY

Properly specified and applied applications of OKON S-40 may qualify for a 5-Year Warranty (Completion of a project verification form is required to qualify). Two coats are generally required to achieve this performance standard. Not all substrates can achieve this standard regardless of the number of coats applied. Request OKON Warranty procedure for details.

## WARRANTY

The manufacturer will replace this product if, within 60 days of the date of purchase, it is shown to be defective when used as directed. THE MANUFACTURER'S LIABILITY UNDER ANY WARRANTY, WHETHER EXPRESSED OR IMPLIED, IS LIMITED IN DURATION TO 60 DAYS AND IS LIMITED SOLELY TO REPLACEMENT OF THE PRODUCT AND DOES NOT INCLUDE LABOR OR OTHER CONSEQUENTIAL DAMAGES. Some states do not allow limitation on how long an implied warranty lasts or do not allow the exclusion or limitation of incidental or consequential damages. So the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

**KEEP FROM FREEZING: STORAGE 40° F to 90° F**  
**WARNING! KEEP OUT OF REACH OF CHILDREN**



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