

PRODUCT DATA

7^{07 19 16} Water Repellents

ENVIROSEAL[®] 40

Clear, water-based 40% silane penetrating sealer

Description

Enviroseal[®] 40 is a clear, water-based, 40% alkylalkoxysilane penetrating sealer. It provides long-lasting protection against moisture intrusion, freeze/thaw cycles, and chloride intrusion. It is ideal for traffic-bearing surfaces.

Yield

Concrete:

100 – 200 ft²/gal (2.4 – 4.8 m²/L)

Brick:

100 – 200 ft²/gal (2.4 – 4.8 m²/L)

Always apply a test area to determine actual coverage rates. Coverage rates will vary greatly with the porosity of the substrate.

Packaging

5 gallon (19 L) pails

54 gallon (205 L) drums

Color

Milky white liquid; clear when dry

Shelf Life

18 months when properly stored

Storage

Store in unopened containers in a clean, dry area between 35 and 110° F (2 and 43° C).

Features

- Water based, VOC compliant
- Excellent penetration
- 40% silane
- Breathable
- Transparent, nonstaining
- One component

Benefits

- Environmentally friendly
- Protects against damage from moisture intrusion and chloride ion penetration
- Ideal for traffic-bearing surfaces
- Allows interior moisture to escape without damaging sealer
- Does not alter surface appearance
- Easy to apply; saves labor

Where to Use

APPLICATION

- Parking garages
- Stadiums
- Bridge decks
- Concrete highway road surfaces
- Ramps and barrier rails
- Stadiums
- Cooling towers
- Many other reinforced concrete structures

LOCATION

- Horizontal and vertical
- Exterior or interior
- Above grade

SUBSTRATE

- Concrete substrates: architectural, glass-fiber-reinforced, precast, cast in place, silica fume
- New and existing concrete

How to Apply

Surface Preparation

1. Verify substrate has properly cured. Concrete should obtain 80% of design strength, typically achieved within 14 – 28 days.
2. Clean concrete surfaces of all sand, surface dust and dirt, oil, grease, chemical films and coating, s and other contaminants prior to application. Use waterblast, sandblast, or shotblast as necessary to achieve the desired surface condition.
3. Surface, air, and material temperatures should be 40 to 110° F (4 to 43° C) during application. Do not apply Enviroseal[®] 40 when temperatures are expected to fall below 40° F (4° C) within 12 hours.
4. Surfaces to be treated can be slightly damp; however, a dry surface is suggested for maximum penetration of sealer. Do not apply Enviroseal[®] 40 if standing water is visible on the surface to be treated.
5. Crack control, caulking, patching, and expansion joint sealants can be installed before or after application of the sealer. Allow a minimum of 6 – 12 hours curing time for caulking and sealant materials (or until they have skinned over) before applying Enviroseal[®] 40.

Technical Data

Composition

Enviroseal® 40 is a water-based alkylalkoxysilane sealer.

Compliances

- Alberta DOT, Type 1b

Typical Properties

PROPERTY	VALUE
Solids and active ingredients, % by weight	40
Specific gravity, 77° F, (25° C)	0.95
Density, lbs/gal	7.9
Penetration, in (mm), average depth, depending upon substrate	0.24 (6.1)

Test Data

PROPERTY	RESULTS	TEST METHODS
Flash point, ° F (° C)	> 200 (> 93)	ASTM D 3278, SETA
VOC content, lb/gal (g/L)	< 2.92 (< 350)	EPA Method 24
Water absorption, %		ASTM C 642
48 hours	0.42	
50 days	1.2	
Scaling resistance rating, non-air-entrained concrete, 100 cycles treated concrete	0 – No Scaling	ASTM C 672
Resistance to chloride-ion penetration, lbs/yd³ (kg/m³)		AASHTO T 259 and T 260
Criteria of 1.5 at 1/2" (13 mm)	< 0.52 (< 0.31)	
Criteria of 0.75 at 1" (25 mm)	0.00 (0.00)	
Water weight gain, % reduction	85 – exceeds criteria	NCHRP 244 Series II-cube test
Absorbed chloride, % reduction	87 – exceeds criteria	NCHRP 244 Series II-cube test
Absorbed chloride, % reduction	99 – exceeds criteria	NCHRP 244 Series IV - Southern climate
Water repellent performance, %		Alberta Transportation and Utilities Procedures - Type 1b
Initial performance	89	
Post-abrasion performance	89.4	

Test results are averages obtained at a coverage rate of 125 ft²/gal (3.12 m²/3.8 L) under laboratory conditions. Reasonable variations can be expected.

Application

1. Test a small area of surface (generally a 5 by 5 ft [1.5 by 1.5 m] section) before starting general application of any clear penetrating sealer to ensure desired results and coverage rates. Allow 5 – 7 days for the product to fully react before evaluating.
2. Stir material thoroughly before and during application.
3. Apply to saturation. Apply by low-pressure non-atomizing spray or, if desired on horizontal surfaces, by pouring, followed by a squeegee or a broom for even distribution.

Drying Time

Typical drying time for Enviroseal® 40 is 4 hours at 70° F (21° C) and 50% relative humidity. Cooler temperatures or higher relative humidity can extend the drying time.

Clean Up

Clean equipment and tools with hot soapy water. Overspray can be cleaned immediately with hot soapy water. Dried residue can be cleaned with a mild citric acid or very hot water, then scrubbed with a plastic sponge.

For Best Performance

- Keep material from freezing.
- Do not dilute Enviroseal® 40.
- Do not apply during inclement weather or when inclement weather is anticipated within 12 hours.
- To prevent damage to nearby shrubbery and landscaping, cover or protect with drop cloth.
- Enviroseal® 40 may leave a temporary slippery surface for up to several hours after application. Therefore, traffic-bearing surfaces should not be reopened until the treated surface is dry.
- Variations in the texture and porosity of the substrate will affect the coverage and performance of the product.
- Enviroseal® 40 will not inhibit water penetration through unsound or cracked surfaces or surfaces with defective flashing, caulking, or structural waterproofing.
- Line striping can be done after application of the sealer.
- Make certain the most current versions of product data sheet and MSDS are being used; call Customer Service (1-800-433-9517) to verify the most current versions.
- Proper application is the responsibility of the user. Field visits by BASF personnel are for the purpose of making technical recommendations only and not for supervising or providing quality control on the jobsite.

Health and Safety

ENVIROSEAL® 40

Caution

Enviroseal® 40 contains alkoxyisilane.

Risks

May cause skin, eye or respiratory irritation. Ingestion may cause irritation.

Precautions

KEEP OUT OF THE REACH OF CHILDREN. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Keep container closed when not in use. DO NOT take internally. Use only with adequate ventilation. Use impervious gloves, eye protection and if the TLV is exceeded or used in a poorly ventilated area, use NIOSH/MSHA approved respiratory protection in accordance with applicable federal, state and local regulations.

First Aid

In case of eye contact, flush thoroughly with water for at least 15 minutes. In case of skin contact, wash affected areas with soap and water. If irritation persists, SEEK MEDICAL ATTENTION. Remove and wash contaminated clothing. If inhalation causes physical discomfort, remove to fresh air. If discomfort persists or any breathing difficulty occurs or if swallowed, SEEK IMMEDIATE MEDICAL ATTENTION. Refer to Material Safety Data Sheet (MSDS) for further information.

Proposition 65

This product contains material listed by the state of California to cause cancer, birth defects, or other reproductive harm.

VOC Content

Less than 2.92 lbs/gal or 350 g/L, less water and exempt solvents.

**For medical emergencies only,
call ChemTrec (1-800-424-9300).**

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