SIP-1133 PCC Seal
Concrete Seal

Technical Data Sheet
Revision 07/31/2026

SIP-1133™ PCC Seal is a fast-setting, water-based, soy-derived penetrating treatment for sound, absorbent Portland cement concrete. Its patented acrylated epoxidized soybean-oil chemistry absorbs into the concrete pore network and reacts to help seal pores against moisture and deicing-salt exposure. Product-specific laboratory testing showed improved freeze-thaw and salt-scaling performance. In Iowa State laboratory scaling comparisons, treated specimens lasted 15 to more than 21 cycles while untreated specimens failed after one to three cycles—more than 10 times the cycles in certain specimen comparisons. Laboratory results are specific to the tested materials and methods and do not establish an exact field service life.

PHYSICAL PROPERTIES

APPEARANCE	White to light yellow
SOLIDS CONTENT (%)	15
VISCOSITY @ 25°C	5-25 cP
DENSITY @ 25°C (g/cm³)	1
pH	7.1 (neutral)
ACTIVE ACRYLIC CONTENT (%)	3.4
ACID VALUE (mg KOH/g)	0.11
RETURN TO TRAFFIC[a]	About 1 hour
STORAGE TEMPERATURE	40-80°F
SHELF LIFE	12 months unopened
DILUTED MATERIAL	Use within 7 days

WHERE TO USE

- Newly poured concrete after suitable cure
- Sound, absorbent existing concrete
- Roads, bridge decks, curbs, sidewalks, and facilities
- Exterior concrete exposed to water, salts, and freeze-thaw

KEY FEATURES

- Penetrates below the surface and dries clear
- Water-based, soy-derived, non-silane chemistry
- Designed for return to traffic in about one hour
- Helps limit moisture and deicing-salt exposure
- Patented AESO technology (U.S. Patent 12,297,150)
- Preservation treatment; not a structural repair

[a] Approximate under suitable conditions; confirm surface condition and friction before reopening.

APPLICATION RATES

Standard PCC Application:

Dilute 1 gallon concentrate with 2 gallons potable water. Apply ready-to-use treatment at 0.025 gal/yd²: one gallon per 40 yd² (360 ft²). One gallon concentrate makes three gallons and treats 120 yd² (1,080 ft²). Confirm rate on a test area.

APPLICATION GUIDANCE

Weather Requirements:

Concrete and ambient ≥40°F and rising
Dry surface, winds <10 mph
No rain expected before set
Apply ≥2 hours before sunset

Surface Preparation:

Start with sound, clean, dry, absorbent concrete
Repair serious damage and correct drainage first
Identify coatings or sealers that can block absorption
Protect adjacent areas and confirm a test area

Equipment:

Use controlled low-pressure spray or suitable distributor
Apply a uniform rate without puddling
Control overspray and follow the current SDS

PACKAGING SIZE

- 5-gallon Pail
- 55-gallon Drums
- 275-gallon Tote
- Tanker (45,000 lbs.)

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PERFORMANCE AND PRODUCT EVIDENCE

Performance Aspect	Test Method / Observation	Results
CMT Freeze-Thaw	Concrete specimens tested through 180 cycles in general accordance with ASTM C666	One development series recorded 4.55% mass loss versus 7.96% for untreated control, a 42.9% reduction
CMT Relative Modulus	Separate development series compared across five groups	Highest observed average relative dynamic modulus among the five groups at 120 cycles
Iowa State Scaling	Treated and untreated laboratory specimens exposed to repeated scaling cycles	Untreated failed after 1–3 cycles; treated lasted 15 to >21 cycles, exceeding 10x in certain comparisons
Field Application	Page County, Iowa concrete-pavement project	Demonstrated controlled spray application on an operating pavement project
Return to Traffic	Product design target under suitable weather and surface conditions	About one hour after surface condition and friction are confirmed

BUYER-FACING PRODUCT ADVANTAGES

SIP-1133™ uses water-based, soy-derived AESO chemistry and is designed to dry clear and non-tracking. The current SDS reports no odor, a 599°F flash point, and non-dangerous-goods status for U.S. DOT transport. At qualifying bulk volume and the stated coverage rate, material cost can be less than $1 per square yard. That figure is material cost only and excludes labor, preparation, equipment, freight, tax, waste, and project-specific controls.

SAFETY, HANDLING & LIMITATIONS

Storage & Handling:

Shelf life is 12 months from manufacture in the unopened original container when stored at 40–80°F. Keep containers tightly closed, dry, and out of direct light; do not allow to freeze. Use diluted material within seven days. Clean tools with water before material cures.

Limitations:

Not a crack filler, patch, joint repair, or structural treatment. Do not apply over standing water, blocked surfaces, or in freezing conditions. Laboratory comparisons do not guarantee a field service life. Confirm absorption, appearance, rate, surface condition, and friction on a test area.

QUALITY ASSURANCE & DOCUMENTATION

Each production lot ships with a Certificate of Analysis listing viscosity (ASTM D445), density (ASTM D1475), pH (ASTM E70), and oil-phase oxirane and acid value (AOCS methods). Follow the lot-specific manufacture date, storage requirements, and 12-month unopened shelf life shown in current product documentation.

WARRANTY & DISCLAIMER

The information herein reflects current knowledge and test data as cited. Because application conditions vary and are beyond SoyLei's control, no express or implied warranty is made as to results. Always verify rate and performance on a job-specific test strip and consult the SDS before use.

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