

Mapecrete Hard SI

Sodium Silicate Densifier for Concrete



DESCRIPTION

Mapecrete® Hard SI is a clear, water-based sodium silicate densifier used to harden and dustproof concrete surfaces. It chemically reacts with the free lime and calcium carbonate in concrete, forming a dense surface.

FEATURES AND BENEFITS

- Environmentally friendly with a VOC-free and odorless formula
- Can be applied to both new and existing concrete
- Seals, densifies and dustproofs in one operation
- Treated concrete resists penetration of water
- Provides an attractive, durable floor after application

INDUSTRY STANDARDS AND APPROVALS

- USDA-compliant
- Canadian Health Department: Food-Facility Safe

WHERE TO USE

- Concrete floors subjected to frequent pedestrian traffic, and light industrial vehicular traffic
- Horizontal interior concrete surfaces
- Carbonated concrete surfaces

SUITABLE SUBSTRATES

- New (at least 7 days old) and existing concrete surfaces, structurally sound and stable with a hard-troweled finish

SURFACE PREPARATION

For new concrete

- After final troweling, moisture-cure or sheet-membrane-cure in accordance with ASTM C171, or use a clear, dissipating curing compound in accordance with ASTM C309. Cure for 7 days or longer for the best results.
- Concrete should be clean and free of dirt, residue and any contaminant that may interfere with the penetration of *Mapecrete Hard SI*.
- Completely remove any curing compound before applying *Mapecrete Hard SI*.

For existing/older concrete

- Concrete should be clean and free of any dirt, residue, debris, curing compounds, cure and seals, paint, coatings, oil and wax that could prevent the penetration of *Mapecrete Hard SI*.

MIXING

Before product use, take appropriate safety precautions. Refer to the Safety Data Sheet for details.

- *Mapecrete Hard SI* requires no pre-mixing or blending. Use directly from the container.

PRODUCT APPLICATION

Read all installation instructions thoroughly before installation.

1. Pre-dampen concrete when ambient temperatures are greater than 80°F (26°C). Apply *Mapecrete Hard SI* after all standing water has disappeared.
2. Apply *Mapecrete Hard SI* to the concrete surface with a low-pressure sprayer, or by pouring directly onto the surface and aggressively scrubbing into the surface with a soft-bristle broom or mechanical scrubber at the rate of 200 to 250 sq. ft. per U.S. gal. (4.9 to 6.12 m² per L).
3. Additional coats of *Mapecrete Hard SI* may be applied if the concrete surface is very absorptive.
4. Remove all excess material from the surface with a squeegee, push it to the next area and repeat.

CLEANUP

- Clean tools and equipment immediately after use with soap and water.
- Dried material may require mechanical means for removal.

LIMITATIONS

- Protect *Mapecrete Hard SI* from freezing. If the product freezes, thaw and stir it before use.
- The air temperature during application must be between 40°F and 100°F (4°C and 38°C).
- For optimum installation, apply the product when surface temperatures are at least 40°F (4°C) and rising.
- At an ambient temperature of 70°F (21°C), allow *Mapecrete Hard SI* to dry 4 to 6 hours before exposure to light foot traffic.
- *Mapecrete Hard SI* should not be used on textured concrete.
- Over-application may result in whitening on the surface once cured, which may only be removed by mechanical means.
- Protect adjacent surfaces – including metals, glass and wood – from overspray. Immediately wash off any overspray with potable water.
- Do not dilute.

Consult MAPEI's Technical Services Department for installation recommendations regarding any substrates and conditions not listed.

Product Performance Properties

Laboratory Tests	Results
VOCs	0 g per L
Specific gravity at 70°F (21°C)	1.13
Density	9.39 lbs. per U.S. gal. (4.26 kg per 3.79 L)
Solids content	17%
pH	11.7
Abrasion/wear resistance (ASTM C779) At 28 days	+ 225% increased wear resistance
Coefficient of friction (ASTM F1679)	Dry: 0.81 Wet: 0.72
Liquid repellency (Rilem Method 11.4) – water absorbed in 24 hours	Untreated concrete: 0.169 U.S. oz. (5 mL) <i>Mapecrete Hard SI</i> -treated concrete: 0.0338 U.S. oz. (1 mL)
Consistency	Sprayable and pourable liquid
Color	Clear

Shelf Life and Application Properties

Shelf life	2 years in original, unopened packaging
Drying time at 70°F (21°C)	1 hour
Ready for light foot traffic	4 to 6 hours
Ready for wheel traffic	24 hours

CSI Division Classification

Concrete Finishing

03 35 00

Approximate Coverage*

per 1 U.S. gal. (3.79 L)

Coverage

200 to 250 sq. ft. per U.S. gal. (4.9 to 6.12 m² per L)** Coverage varies depending on the surface porosity*

Packaging

Sizes

Pail: 5 U.S. gals. (18.9 L)

Drum: 55 U.S. gals. (208 L)

ADDITIONAL INFORMATION

Refer to the SDS for specific data related to health and safety as well as product handling.

For information on MAPEI's commitment to sustainability and transparency, as well as how MAPEI products may contribute to green building standards and certification systems, contact sustainability_USA@mapei.com (USA) or sustainability-durabilite@mapei.com (Canada).

LEGAL NOTICE

The contents of this Technical Data Sheet ("TDS") may be copied into another project-related document, but the resulting document shall not supplement nor replace requirements per the TDS in effect at the time of the MAPEI product installation. For the most up-to-date TDS and warranty information, please visit our website at www.mapei.com. **ANY ALTERATIONS TO THE WORDING OR REQUIREMENTS CONTAINED IN OR DERIVED FROM THIS TDS SHALL VOID ALL RELATED MAPEI WARRANTIES.**

Before using, the user must determine the suitability of our products for the intended use, and the user alone assumes all risks and liability. **ANY CLAIM SHALL BE DEEMED WAIVED UNLESS MADE IN WRITING TO US WITHIN FIFTEEN (15) DAYS FROM DATE IT WAS, OR REASONABLY SHOULD HAVE BEEN, DISCOVERED.**

CONTACT INFORMATION

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Edition Date: September 13, 2023 MK 3000086 (23-2054)

For the most current product data and BEST-BACKEDSM warranty information,
visit www.mapei.com.

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