DuPont™ Capstone® ST-100HS

PENETRATING SEALER FOR POROUS SURFACES

TECHNICAL INFORMATION

Description

DuPont™ Capstone® ST-100HS is an aqueous fluorochemical dispersion that provides a durable, subsurface, transparent protective barrier against oil and water on porous mineral surfaces. Capstone® ST-100HS is used in water-based penetrating sealers for stone, unglazed tile, grout, terra cotta, and other porous mineral surfaces such as concrete, brick, stone and tile. Capstone® ST-100HS provides oil and water repellency, stain resistance, and easy stain cleanup.

Product Properties

Appearance	Clear to slightly hazy, yellow
Stability	Stable at normal temperatures Perishable if frozen
Active Solids, %	24–25
Density, g/mL	1.104
Flash point (closed cup), °C (°F)	Not flammable
Boiling Point, °C (°F)	~100 (~212)
Freezing Point, °C (°F)	~0 (~32)

** This table gives typical properties (not specifications) based on historical production performance. DuPont does not make any express or implied warranty that this product will continue to have these typical properties. Please contact DuPont for product specifications.*

Applications and Formulating Information

Capstone® ST-100HS should be diluted to 4–10% working strength with deionized or tap water for appropriate application levels. The optimum level should be determined for each application. If blended, maintain pH below 6. Capstone® ST-100HS provides good repellency to many surfaces, but durability is best for porous materials. For example, concrete panels treated with Capstone® ST-100HS will bead mineral oil after prolonged weathering. The product may be applied using a saturated brush, roller, or mop, or a low-pressure garden-type sprayer. A biocide should be added to formulations made using Capstone® ST-100HS to protect the formulation against microbial growth.

Stirring containers of Capstone® ST-100HS prior to use is recommended, as some settling does occur. Settling is greatly reduced once the product is diluted.

Performance

DuPont™ Capstone® ST-100HS (diluted to 8% product in water) was compared to a competitive solvent-based silicone sealer. Each product was applied to limestone and to Saltillo (also known as Mexican clay tile, or terra cotta) and allowed to dry for three days. Corn oil, Italian dressing, ketchup, mustard, grape juice, and coffee were then placed on the treated substrates. After 24 hours, the tiles were washed with a mild detergent solution and allowed to dry. The remaining stains were rated as follows: 0 = No stain, 1 = Very light stain, 2 = Light stain, 3 = Moderate stain, 4 = Heavy stain. The ratings were totaled for each tile sample.

The results below show that Capstone® ST-100HS outperformed the competitive solvent-based silicone sealer. Similar results have been achieved on other stone substrates such as granite and marble.

Performance Comparison

Treatment	Limestone	Saltillo
Capstone® ST-100HS	6	6
Silicone (solvent-based)	19	17
Untreated	16	14

Treatment	Oil Repellency	Water Repellency	Stain Resistance
Capstone® ST-100HS	excellent	excellent	excellent
Silicone	poor	excellent	poor to good
Untreated	none	none	very poor

Personal Safety, First Aid, Storage and Handling

See the Material Safety Data Sheet (MSDS) for product specific information. Mix well before using. Protect from freezing.

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DuPont™ Capstone® ST-100HS

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