

DuPont™ Capstone® Repellent ST-100

PENETRATING SEALER FOR POROUS SURFACES

TECHNICAL INFORMATION

Description

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

Typical Properties

Appearance	Clear to slightly hazy, yellow
Stability	Stable at normal temperatures Perishable if frozen
Active Solids, %	19–20
Density, g/mL	1.06
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

DuPont™ Capstone® repellent Grade ST-100 should be diluted to 5–12% 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. The product provides good repellency to many surfaces, but durability is best for porous materials. For example, concrete panels treated with Grade ST-100 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 Grade ST-100 to protect the formulation against microbial growth.

It is recommended to stir containers of DuPont™ Capstone® repellent Grade ST-100 prior to use as some settling does occur. Settling is greatly reduced once the product is diluted.

Performance

DuPont™ Capstone® repellent Grade ST-100 (diluted to 10% 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 Grade ST-100 outperformed the competitive solvent-based silicone sealer. Similar results have been achieved on other stone substrates such as granite and marble.

Performance Comparison

24 Hour Stain Scores

Treatment	Limestone	Saltillo
DuPont™ Capstone® repellent Grade ST-100	6	6
Silicone (solvent-based)	19	17
Untreated	16	14

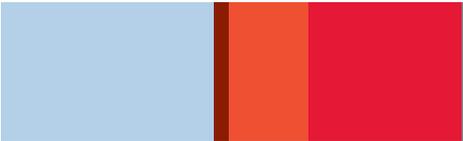
Treatment	Oil Repellency	Water Repellency	Stain Resistance
DuPont™ Capstone® repellent Grade ST-100	excellent	excellent	excellent
Silicone	poor	excellent	poor to good
Untreated	none	none	very poor

First Aid, Storage and Handling

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



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DuPont™ Capstone® Repellent ST-100

DuPont™ Capstone® Repellents and Surfactants:

- Deliver more sustainable solutions with maximum performance
- Are short-chain molecules that cannot break down to PFOA in the environment
- Are supported by an in-depth foundation of data
- Are in compliance with REACH requirements
- Meet the goals of the U.S. Environmental Protection Agency 2010/15 PFOA Stewardship Program

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