



## Technical Data Sheet

### XIAMETER™ OFS-0772 Siliconate

Water repellent for masonry surfaces

#### Features & Benefits

- Imparts water repellency to a wide variety of substrates
- Reduces water absorption into substrates, thus reducing spalling due to freeze-thaw and efflorescence
- Colorless and non-yellowing protection preserves the natural appearance of substrate
- Penetrating and breathable
- Low VOC
- Non-flammable

#### Composition

- Water dilutable sodium methyl siliconate solution
- Clear to slightly yellow

#### Applications

- Bricks; to increase water repellency and reduce water absorption
- Manufactured and natural stones, such as limestone, sandstone and ceramics; to reduce efflorescence and improve resistance to effects of weathering
- Roofing granules and other products used in contact with asphalt; to provide stain resistance and to improve adhesion of granules to asphalt
- High absorptive mineral aggregates such as Perlite™; to reduce water absorption
- Decorative tile; to seal against moisture

#### Typical Properties

Specification Writers: These values are not intended for use in preparing specifications.

Property	Unit	Result
Solids Content, After 90 Min At 150°C (302°F)	percent	30
Silicone Solids Content	percent	19
Specific Gravity At 25°C (77°F)		1.25
Flash Point, Open Cup	°C (°F)	> 100 (212)
pH		13
Density	lb/gal (g/L)	10.4 (1250)
Solvent (Thinner)		Water
Volatile Organic Compound Content	lb/gal (g/L)	0.33 (39)

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XIAMETER™ OFS-0772 Siliconate

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**Description** XIAMETER™ OFS-0772 Siliconate is a nonflammable, water soluble sodium methyl siliconate solution designed to impart water repellency to a wide variety of surfaces. Supplied at a concentration of 30 percent solids in water, XIAMETER OFS-0772 Siliconate is usually diluted to a concentration of 3 percent before being applied. The final concentration depends on the application. The siliconate reacts with moisture and carbon dioxide in the air to form an insoluble water-resistant resin within 24 hours.

**How To Use** XIAMETER OFS-0772 Siliconate is primarily used as a material additive or surface treatment in applications that utilize its ability to impart a water repellent surface and reduce water absorption.

#### **As a Surface Treatment**

XIAMETER OFS-0772 Siliconate is diluted to a concentration of 3 percent solids or less just prior to application. To prepare a 3 percent solution, mix one gallon (3.78 liters) of XIAMETER OFS-0772 Siliconate as supplied with 11 gallons (41.6 liters) of water.

Do not use concentrations higher than 3 percent solids unless prior testing indicates a necessity. The use of higher concentrations than required may result in the formation of a white residue on the surface. Users should test any concentration on the substrate prior to use.

After application of the silicone solution, the treated surface should be allowed to dry at least 24 hours to develop maximum water repellency. This interval may be shortened somewhat by force-drying at temperatures up to 149°C (300°F). While this removes the water quickly, time must be allowed for the curing reaction between XIAMETER OFS-0772 Siliconate and the surface being treated. CO<sub>2</sub> streams do not appear to reduce the cure time appreciably.

#### **Application Methods**

Dilute solutions of XIAMETER OFS-0772 Siliconate can be applied by dipping, spraying or brushing.

Surfaces to receive water soluble silicone should be lightly dampened immediately prior to application.

Water soluble silicone does not wet a surface that has been previously treated with a water repellent.

When spraying XIAMETER OFS-0772 Siliconate, great care should be taken to protect nearby vegetation or articles from overspray. The material is very caustic. It will damage or kill vegetation and will stain or etch glass, plastic, aluminum and most metals. If contamination does occur, wash immediately with water. Due to the high solvent resistance of the cured material, water repellent that has dried on glass must be scraped, and other surfaces may require sandblasting.

If a white precipitate of Na<sub>2</sub>CO<sub>3</sub> should form due to the use of too concentrated a solution of water repellent, rundown, overlapping, or second coating, sand blasting or wire brushing may be necessary to remove if the water does not.

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Handling Precautions	PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED IN THIS DOCUMENT. BEFORE HANDLING, READ PRODUCT AND SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE SAFETY DATA SHEET IS AVAILABLE ON THE DOW WEBSITE AT <a href="http://WWW.CONSUMER.DOW.COM">WWW.CONSUMER.DOW.COM</a> , OR FROM YOUR DOW SALES APPLICATION ENGINEER, OR DISTRIBUTOR, OR BY CALLING DOW CUSTOMER SERVICE.
Usable Life And Storage	Product should be stored at or below 25°C (77°F) in original, unopened containers.  If the temperature is allowed to drop below freezing, a crystalline structure may develop. This does not permanently impair the effectiveness of the material. When heated to room temperature, the solution will again become clear and ready for use.
Limitations	This product is neither tested nor represented as suitable for medical or pharmaceutical uses.  Not intended for human injection. Not intended for food use.
Shipping Limitations	DOT Classification: Corrosive Material.
Health And Environmental Information	To support customers in their product safety needs, Dow has an extensive Product Stewardship organization and a team of product safety and regulatory compliance specialists available in each area.  For further information, please see our website, <a href="http://www.consumer.dow.com">www.consumer.dow.com</a> or consult your local Dow representative.

Table 1: Performance of XIAMETER™ OFS-0772 Siliconate on Various Substrates<sup>1</sup>

Substrate	%Active Total Solids	Coverage Rate, ft <sup>2</sup> /gal (m <sup>2</sup> /l)	% Water Exclusion vs. Control after 72 hours <sup>2</sup>	% Water Absorption after 72 hours <sup>3</sup>
Limestone	3	50 (1.2)	62.1	2.3
	control			6.0
Glen Gary Salem Brick	3	200 (4.9)	75.4	1.1
	control			4.6
Belden Alamo Jumbo Brick	3	130 (3.2)	74.4	1.2
	control			4.70
Belcrest 350 Brick	3	110 (2.7)	65.2	1.50
	control			4.50

1. Modified Federal Specification SS-W-110C testing or Modified ASTM D 6532 – brick or stone sample supported in 1/4 inch (6 mm) of water for 72 hours
2. Calculation is based on weight gain of control
3. Calculation is based on weight of block before soaking

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