

# Product Information

## Hydrophobic Powder

DOW CORNING

# Dow Corning® GP SHP 50 Silicone Hydrophobic Powder

## FEATURES & BENEFITS

- Free-flowing white powder
- Makes cement-based materials more hydrophobic
- Provides resistance to water absorption throughout the material
- Easy to mix in powdered composition
- Easy to disperse in water
- Reduces aesthetic problems such as efflorescence
- Minimizes liquid water transport through cured cementitious material through surface or capillary action
- Can substantially decrease water absorption by cementitious material when in direct contact for up to 24 hours
- Can be added at levels ranging from 0.2 to 1.0 weight % with limited impact on compression strength

## COMPOSITION

- Silane-based

Free-flowing powder designed for cementitious dry-mix powder applications

## APPLICATIONS

- Added to dry ingredients of cement-based compositions to improve hydrophobic performance
- As a barrier to the capillary movement of liquid water in grouts, joint fillers, mortar, EIFS, stucco, and façade-rendering applications

## TYPICAL PROPERTIES

Specification Writers: These values are not intended for use in preparing specifications. Please contact your local Dow Corning sales office or your Global Dow Corning Connection before writing specifications on this product.

Test	Property	Unit	Result
CTM <sup>1</sup> 0176B	Appearance		White, free-flowing granules
	Composition		Silane based
	Particle size distribution <50 Silicone Hydrophobic Powder 0 micron	%	>80
	Mean particle size	µm	200-300
	Bulk density	g/L	650

<sup>1</sup>CTMs (Corporate Test Methods) correspond to standard ASTM tests in most instances. Copies of CTMs are available upon request.

## DESCRIPTION

*Dow Corning®* GP SHP 50 Silicone Hydrophobic Powder was developed to offer the performance of a liquid silicon-based hydrophobic material in dry delivery systems.

*Dow Corning* GP SHP 50 Silicone Hydrophobic Powder is a three-component granule, consisting of a powder carrier, an encapsulant, and a finely dispersed silicone active. The encapsulant provides storage stability in the powdered composition and the release of the active ingredient upon addition of water.

This product can find uses in many application areas where the protection of the substrate from liquid water ingress is a critical issue.

*Dow Corning* GP SHP 50 Silicone Hydrophobic Powder provides excellent dispersibility into water.

As with other siloxane-based products, surface hydrophobic property of mortar modified with *Dow Corning* GP SHP 50 Silicone Hydrophobic Powder is resistant to UV irradiation.

*Dow Corning* GP SHP 50 Silicone Hydrophobic Powder will provide instant hydrophobicity upon cure.

## HOW TO USE

*Dow Corning* GP SHP 50 Silicone Hydrophobic Powder is a dry powder. This product is intended to be added to the dry ingredients of the mixture.

Determination of optimum addition levels should be evaluated in the laboratory.

Addition levels of up to 1.0 weight % of the dry mix ingredients are possible, but most applications would typically require between 0.2 and 0.75 weight % *Dow Corning* GP SHP 50 Silicone Hydrophobic Powder in the dry mix.

The water level of the final formulation should be optimized to the desired consistency.

Cement-based mixtures formulated using *Dow Corning* GP SHP 50 Silicone Hydrophobic Powder can be mixed and applied using standard industry equipment.

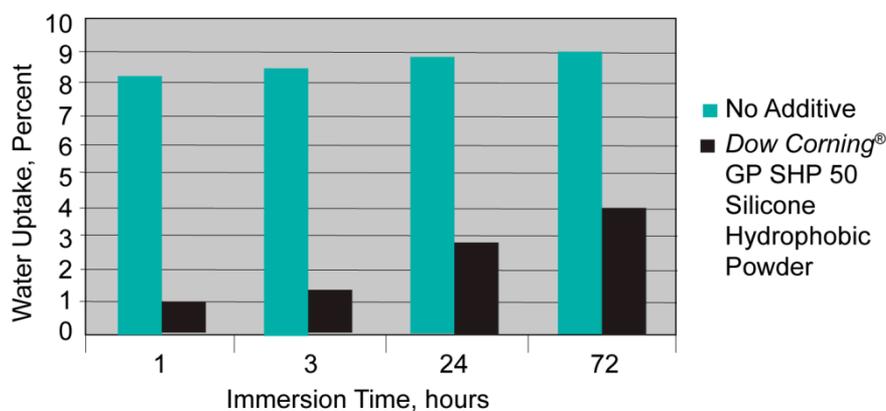
## HANDLING

### PRECAUTIONS

*Dow Corning* GP SHP 50 Silicone Hydrophobic Powder is a free-flowing powder, and as such can create dust. Please consult the material safety data sheet for specific handling information as well as recommendations for personal protective equipment.

**PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED IN THIS DOCUMENT. BEFORE HANDLING, READ PRODUCT AND MATERIAL SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE MATERIAL SAFETY DATA SHEET IS AVAILABLE ON THE DOW CORNING WEBSITE AT DOWCORNING.COM, OR FROM YOUR DOW CORNING SALES APPLICATION ENGINEER, OR**

Figure 1: Water Uptake Over Time<sup>1</sup>



<sup>1</sup> Formulation containing 2.21% of *Dow Corning* GP SHP 50 Silicone Hydrophobic Powder added to 73.34% sand and 24.45% cement versus a control mixture without the additive.

**DISTRIBUTOR, OR BY CALLING DOW CORNING CUSTOMER SERVICE.**

(PS&RC) specialists available in each area.

## USABLE LIFE AND STORAGE

*Dow Corning* GP SHP 50 Silicone Hydrophobic Powder should be stored under dry conditions out of direct sunlight.

For further information, please see our website, [dowcorning.com](http://dowcorning.com) or consult your local Dow Corning representative.

When stored at or below 40 °C (104 °F) in the original unopened containers, *Dow Corning* GP SHP 50 Silicone Hydrophobic Powder has a usable life of 21 months from the date of manufacture.

## LIMITED WARRANTY INFORMATION – PLEASE READ CAREFULLY

The information contained herein is offered in good faith and is believed to be accurate. However, because conditions and methods of use of our products are beyond our control, this information should not be used in substitution for customer's tests to ensure that our products are safe, effective, and fully satisfactory for the intended end use. Suggestions of use shall not be taken as inducements to infringe any patent.

## PACKAGING INFORMATION

*Dow Corning* GP SHP 50 Silicone Hydrophobic Powder is supplied in 10-kg (22.1-lb) bags and 1000-kg (2204.6-lb) big bags.

*Dow Corning's* sole warranty is that our products will meet the sales specifications in effect at the time of shipment.

## LIMITATIONS

This product is neither tested nor represented as suitable for medical or pharmaceutical uses.

Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted.

## HEALTH AND ENVIRONMENTAL INFORMATION

To support customers in their product safety needs, Dow Corning has an extensive Product Stewardship organization and a team of Product Safety and Regulatory Compliance

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