



Technical Data Sheet

DOWSIL™ 9506 Powder

INCI NAME: Dimethicone/Vinyl Dimethicone Crosspolymer

Features & Benefits

- White elastomeric silicone powder
- Capable of absorbing polar and non-polar oils
- Thickening agent for water-in-oil and water-in-silicone formulations and volatile silicones
- Good oil and sebum absorption
- Provides dry smoothness and a powdery-light non-greasy skin feel
- Reduces tackiness of formulations
- Provides novel delivery for other formulation components (absorbs volatile silicones)
- Quick absorption
- Cold processing

Applications

- Skincare
- Sun care
- Hair care
- Many other potential applications (example: color cosmetics, etc.)

Typical Properties

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

Property	Unit	Result
Appearance		Soft white powder with some agglomeration
Specific gravity		0.98
Bulk density		0.18
Average particle size	µm	3
Particle size range	µm	1–15
Cyclotetrasiloxane (D4) content	%	< 0.1
Cyclopentasiloxane (D5) content	%	< 0.1

Description

DOWSIL™ 9506 Powder is a white cross-linked Dimethyl Polysiloxane elastomer powder.

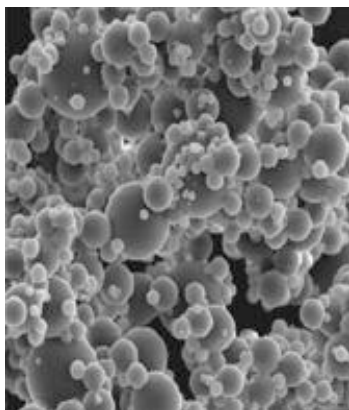


Figure 1: M.E.M. picture of DOWSIL™ 9506 Powder.

How to Use

It is recommended to first disperse DOWSIL™ 9506 Powder in low molecular weight silicone using a homogenizer followed by further mixing with a propeller-type mixer. No heating is required. Homogenization of DOWSIL™ 9506 Powder in low molecular weight silicone slightly decreases the viscosity of the dispersion but improves the appearance of the final formulation.

When making an emulsion with DOWSIL™ 9506 Powder, incorporate the powder into the oil phase and mix with high shear to break up the agglomerates.

Premixing the oil phase is preferred over post addition of the powder after the emulsion has been made.

The recommended use level is 2 to 20%.

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 CONSUMER.DOW.COM, OR FROM YOUR DOW SALES APPLICATION ENGINEER, OR DISTRIBUTOR, OR BY CALLING DOW CUSTOMER SERVICE.

WARNING: DOWSIL™ 9506 Powder is a fine powder and needs to be handled with certain precautions. Avoid dust accumulation. Eliminate sources of ignition. Product can build up static electricity which may be discharged as a spark. If this product is added to a solvent, precautionary measures need to be taken to eliminate sparks.

Usable Life and Storage

When stored at or below 30°C (86°F) in the original unopened containers, this product has a usable life of 27 months from the date of production.

Packaging Information

This product is available in 10 kg bags.

Samples are available in 250 g.

Limitations

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

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, consumer.dow.com or consult your local Dow representative.

Absorption Properties of DOWSIL™ 9506 Powder.

Ingredient	Absorption result (g fluid/5g powder)
Material	
Water	4.50
Capric/Caprylic triglycerides	4.18
Solvents	
Propylene glycol	2.87
Glycerin	2.33
C12-C15 alcohol benzoate	3.23
Esters	
Isopropyl palmitate	5.12
Sunscreens	
Octylmethoxycinnamate	2.68
Oils	
Sunflower oil	2.66
Castor oil	1.64
Hydrocarbons	
Liquid Parafin	4.20
Isododecane	9.29
Silicones	
XIAMETER™ PMX-0245 Cyclopentasiloxane	18.25
XIAMETER™ PMX-200 Silicone Fluid, 50 cSt	4.97

Formulation 30/898: Oil Absorbing Gel.

Ingredient	INCI name	Supplier	Weight%
XIAMETER™ PMX-0345 Cyclosiloxane Blend	Cyclopentasiloxane (and) Cyclohexasiloxane	Dow	76.0
DOWSIL™ 9506 Powder	Dimethicone/Vinyl Dimethicone Cross Polymer	Dow	19.0
XIAMETER™ PMX-1501 Fluid	Cyclopentasiloxane and Dimethicone	Dow	5.0

Procedure

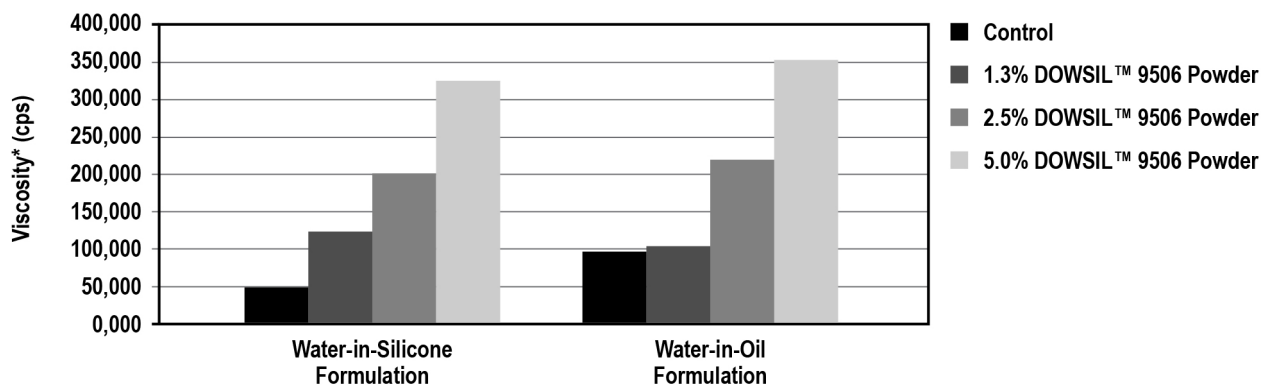
- Mix XIAMETER™ PMX-0345 Cyclosiloxane Blend and XIAMETER™ PMX-1501 Fluid together with a high shear mixer (e.g. Silverson).
- Reduce stirring speed (half-speed) and slowly add DOWSIL™ 9506 Powder to form an homogeneous dispersion. When all the powder has been incorporated, increase the stirring speed and mix for approximately 1 minute until the gel is completely formed.
- Reduce speed to minimum and remove entrapped air.

Sensory Evaluation Results

Sensory parameters	DOWSIL™ 9506 Powder	XIAMETER™ PMX-0245 Cyclopentasiloxane
Before absorption		
Wetness (1 = dry, 10 = wet)	5.14 ¹	8.05 ¹
Spreadability (1 = difficult, 10 = easy)	7.74	8.33
Tackiness (1 = not tacky, 10 = tacky)	2.86	1.86
Absorbency (1 = slowly, 10 = quickly)	7.00	5.38
After absorption		
Gloss (1 = not shiny, 10 = shiny)	3.05 ¹	5.67 ¹
Film residue (1 = no film, 10 = film)	3.29	4.10
Greasiness (1 = not greasy, 10 = greasy)	2.71	3.95
Silkiness (1 = silky, 10 = drag)	2.19 ¹	4.29 ¹
Tackiness (1 = not tacky, 10 = tacky)	1.57	2.05

1. Significantly different 99%

Test method: Paired comparison, incomplete block experiment, number of panelists: 28



*Brookfield DVII spindle RV-07 at 5 rpm

Figure 2: Thickening effect.

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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.

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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.

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