



## DOWSIL™ 1686 Resin

INCI NAME: Polyphenylsilsesquioxane

### Features & Benefits

- Shine / gloss
- Improved color value
- Spreadability/uniformity, detackifier
- Pigment dispersion aid
- Compatible with organic ingredients
- Shine, frizz control (hair care)
- Not made from animal source/origin

### Applications

- Skin care
- Color cosmetics
- Hair care

### Typical Properties

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

Property	Unit	Result
Appearance		Colorless liquid
Viscosity at 25°C	cSt	1000–6000
Specific gravity at 25°C/15.6°C	g/mL	1.19
Refractive index at 25°C		1.49–1.51
Non-volatile content	%	> 90
Flash point, closed cup	°C	150
D4/D5/D6 level	%	< 0.1
China regulatory status		Approved – listed in the Catalogue of Cosmetic Ingredients

### Description

DOWSIL™ 1686 Resin is a liquid polysilsesquioxane resin that can be used to generate skin care formulations that provide comfortable wear, color uniformity, and improved color retention. It can be used in hair care formulations to provide enhanced shine benefits.

## How to Use

DOWSIL™ 1686 Resin may be formulated into oil-in-water emulsions, water-in-silicone emulsions, water-in-oil emulsions, and anhydrous products.

DOWSIL™ 1686 Resin may be pre-mixed in an oil-phase. When mixing with the other ingredients in the oil phase, ensure that the oil phase is compatible and homogeneous. DOWSIL™ 1686 Resin may also be posted added to emulsions provided the emulsion.

**Table 1.** Typical Properties (Compatibility)

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DOWSIL™ 1686 Resin		
Solvent	Compatibility (50:50)	Compatibility (25:75)
Ethanol	Translucent, clear, one phase	Translucent, very hazy, one phase
DOWSIL™ 556 Cosmetic Fluid	Colorless, clear, one phase	Colorless, clear, one phase
XIAMETER™ PMX-200 Fluid, 2 cSt	White, opaque, two phases	White, opaque, two phases
Dicaprylyl Carbonate	Colorless, clear, one phase	Colorless, clear, one phase
Isododecane	Translucent, very hazy, two phases	Translucent, very hazy, two phases
Ethylhexyl Methoxycinnamate	Colorless, clear, one phase	Colorless, clear, one phase
Ethylhexyl Salicylate	Colorless, clear, one phase	Colorless, clear, one phase
C12-15 Alkyl Benzoate	Colorless, clear, one phase	Colorless, clear, two phases
Caprylic/Capric Triglyceride	Translucent, clear, one phase	Translucent, very hazy, one phase

## Handling Precautions

This product is not recommended for use in aerosol applications. Please refer to the linked Aerosol Guidance document, published by Silicones Environmental, Health, and Safety Center (SEHSC) for further information.

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

## Usable Life and Storage

When stored in the original, unopened container, material has a useable life of 900 days.

## Packaging Information

This product is available in 20 kg pails and 230 kg drums.

Samples are available in 500 ml bottles.

## 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, [dow.com](http://dow.com) or consult your local Dow representative.

## **Disposal Considerations**

Dispose in accordance with all local, state (provincial) and federal regulations. Empty containers may contain hazardous residues. This material and its container must be disposed in a safe and legal manner.

It is the user's responsibility to verify that treatment and disposal procedures comply with local, state (provincial) and federal regulations. Contact your Dow Technical Representative for more information.

## **Product Stewardship**

Dow has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our product stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our product stewardship program rests with each and every individual involved with Dow products - from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

## **Customer Notice**

Dow strongly encourages its customers to review both their manufacturing processes and their applications of Dow products from the standpoint of human health and environmental quality to ensure that Dow products are not used in ways for which they are not intended or tested. Dow personnel are available to answer your questions and to provide reasonable technical support. Dow product literature, including safety data sheets, should be consulted prior to use of Dow products. Current safety data sheets are available from Dow.

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