



## DOWSIL™ ES-5600 Silicone Glycerol Emulsifier

INCI Name: Cetyl Diglyceryl Tris(Trimethylsiloxy)silylethyl Dimethicone

### Features & Benefits

- W/Si and W/oil silicone emulsifier
- Non-diluted emulsifier
- Low odor
- Low viscosity
- Formulation flexibility with a broad range of silicone and organic oil phases
- Low viscosity emulsions can be achieved
- Pigments and fine particles dispersant
- Ease of use
- Cold or hot processing

### Composition

- Silicone diglycerol

### Applications

- Silicone emulsifier designed to create low viscosity water-in-oil emulsions
- Oil phase flexibility for the emulsification of silicone and organic oils and their mixture
- Can be used in wide range of personal care applications such as:
  - Skin care
  - Color cosmetics
  - Sun care
  - Antiperspirants and deodorants

### Typical Properties

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

CTM <sup>1</sup>	Property	Unit	Result
0176 B	Appearance		Colorless to light brown, transparent to translucent liquid at 25°C
0004 A	Viscosity	mm <sup>2</sup> /s	2,000–5,000
0001 A	Specific Gravity		0.94
0917 A	Flash Point – Closed Cup	°C	198
	Calculated HLB		2
0002 A	Refractive Index, 25°C		1.43

1. CTM: Corporate Test Method, copies of CTM's are available on request.

## **Description**

DOWSIL™ ES-5600 Silicone Glycerol Emulsifier is a non diluted W/Si and W/oil emulsifier with diglycerol hydrophilic functionality. It does not contain ethylene oxide and propylene oxide, and allows to formulate various PEG-Free cosmetic formulations.

It is designed to produce stable water-in-silicone emulsions and water-in-oil emulsions with enhanced sensory.

DOWSIL™ ES-5600 Silicone Glycerol Emulsifier also allows to disperse pigments and fine particles in silicone fluids and organic oils.

## **How to Use**

The recommended addition level of DOWSIL™ ES-5600 Silicone Glycerol Emulsifier is 2% for emulsions with a high level of water phase. Decreasing the water phase level will require increasing the emulsifier addition level.

Thanks to its broad compatibility with silicone and organic oils and its low viscosity, DOWSIL™ ES-5600 Silicone Glycerol Emulsifier is easily dispersed in the oil phase prior the addition of the water phase.

Stable emulsions can be prepared by slowly adding water phase to the oil phase containing DOWSIL™ ES-5600 Silicone Glycerol Emulsifier using a variety of common mixing devices.

High shear mixing at the end of the emulsification process helps to decrease the particle size and increase the stability of the emulsion.

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

## **Usable Life and Storage**

When stored at or below 40°C in the unopened original containers, this product has a usable life of 720 days from the date of production.

## **Packaging Information**

- 190 kg drums
- 18 kg pails
- 500 g samples

## **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.

dow.com

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