

### Technical Data Sheet

# DOWSIL<sup>TM</sup> 5562 Carbinol Fluid

#### **FEATURES**

- Processing aid for particulate containing formulations
- Polar fluid which provides unique compatibility and aesthetics
- Low formulated odor
- Imparts hydrophilicity and wetting
- · Clear, colorless carbinol fluid
- Unique feel characteristic
- Compatibilizer
- Typical D4 and D5 content is < 0.1%

## **BENEFITS**

- Provides superior particulate suspension, with easier formulation capability compared to products such as castor oil
- Enhances SPF in sun care formulations
- Wide range of compatibilities with both polar and non-polar solvents
- Moisturization
- Smoother, less tacky and more substantive than linear silicones
- Lighter and more lubricious than polar silicones
- Stable in acid/base conditions
- Detackification
- Aqueous formulation stability
- Enhances fragrance release

## **COMPOSITION**

 Silicone polymer with terminal carbinol functionality (ABA), see Figure 1 INCI NAME: Bis-Hydroxyethoxypropyl Dimethicone

#### APPLICATIONS

- Color cosmetics
- Sun care
- Face and body care
- Antiperspirants and deodorants
- Cuticle coat for hair

## TYPICAL PROPERTIES

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

| CTM <sup>1</sup> | Property                        | Unit                   | Result                 |
|------------------|---------------------------------|------------------------|------------------------|
| 0176             | Appearance                      |                        | Clear to slightly hazy |
| 004A             | Viscosity at 25°C (77°F)        | $\text{mm}^2/\text{s}$ | ~50                    |
|                  | Refractive index                |                        | 1.41                   |
| 0006             | Flash point - open cup          | °C                     | > 80                   |
|                  | Cyclotetrasiloxane (D4) content | %                      | < 0.1                  |
|                  | Cyclopentasiloxane (D5) content | %                      | < 0.1                  |

<sup>1</sup>CTM: Corporate Test Method, copies of CTMs are available on request.

### **DESCRIPTION**

DOWSIL<sup>TM</sup> 5562 Carbinol Fluid is a carbinol functional silicone fluid. This material is unique due to its polar organic substituents. The silicone and organic combination provides multiple benefits in personal care applications. This moderately polar material has a novel compatibility profile (see Table 1). This product also acts as a superior suspension aid for pigments, salts, and sunscreens.

#### **HOW TO USE**

This is a low viscosity fluid that is easily incorporated into a variety of personal care formulations.

# 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 WWW.CONSUMER.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 32°C (90°F) in the original unopened containers, this product has a usable life of 24 months from the date of production.

## PACKAGING INFORMATION

This product is available in 200 kg drums and 15 kg pails.

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

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<u>Table 1</u>: Ratios are for DOWSIL 5562 Carbinol Fluid: other material.

| Material                              | 1:9            | 5:5             | 9:1 |
|---------------------------------------|----------------|-----------------|-----|
| C-12-15 Alkyl benzoate                | C <sup>1</sup> | С               | С   |
| Coco-caprylate/caprate                | С              | С               | С   |
| Diisostearyl fumarate                 | С              | С               | С   |
| Isocetyl stearate                     | С              | NC <sup>2</sup> | NC  |
| Octylstearate                         | С              | NC              | NC  |
| Glyceryl trioctanoate                 | С              | С               | С   |
| Octyl methoxycinnamate                | NC             | NC              | С   |
| Isododecane                           | С              | С               | С   |
| Oleyl alcohol                         | NC             | С               | С   |
| XIAMETER™ 1501 Fluid                  | С              | NC              | NC  |
| XIAMETER™ PMX-0245 Cyclopentasiloxane | С              | С               | С   |
| DOWSIL <sup>TM</sup> 556 Fluid        | С              | С               | С   |
| Water                                 | NC             | NC              | NC  |

Figure 1: Chemical structure of DOWSIL 5562 Carbinol Fluid

$$\begin{array}{c|cccc} CH_3 & CH_3 & CH_3 \\ & | & | & | \\ HOCH_2CH_2CH_2CH_2CH_2-SiO --[-SiO-]_x-SiO--CH_2CH_2CH_2CH_2OH \\ & | & | & | \\ CH_3 & CH_3 & CH_3 \end{array}$$



 $<sup>{}^{1}</sup>C$  = Compatible.  ${}^{2}NC$  = Not compatible.