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**TECHNICAL BULLETIN**

**Silmer® G-162**  
Silicone Elastomers

**DESCRIPTION**

The **Silmer® G-162** series is a group of related silicone elastomers that are based upon unique dimethicone/ vinyl dimethicone cross polymers in cyclopentasiloxane. The different products vary in the modifier added to the base polymer which alters the ultimate aesthetics.

**TYPICAL PROPERTIES**

Property	Silmer G-162	Silmer G-162A	Silmer G-162F	Silmer G-162Q
Solvent	D <sub>5</sub>			
Viscosity, cps	300,000 – 800,000			
Appearance	Clear, slightly hazy gel			
Solids, %	10-15%			

**INCI NAMES**

Product	INCI Name
Silmer G-162	Cyclopentasiloxane (and) Dimethicone/Vinyl Dimethicone Crosspolymer
Silmer G-162A	Cyclopentasiloxane (and) Dimethicone/Vinyl Dimethicone Crosspolymer (and) Behenyl Dimethicone/Bis-Vinyldimethicone Crosspolymer
Silmer G-162F	Cyclopentasiloxane (and) Dimethicone/Vinyl Dimethicone Crosspolymer (and) Perfluorononyl Dimethicone
Silmer G-162Q	Cyclopentasiloxane (and) Dimethicone/Vinyl Dimethicone Crosspolymer (and) Trimethylsiloxysilicate

**USES AND APPLICATION**

The tactile feel of a silicone polymer is determined by its structure and the dry feel is achieved by the proper engineering of the silicone polymer. **Silmer G-162** series elastomers provide this highly prized feel.

**Silmer G-162** series elastomers also bring ease of formulation, gloss, pigment dispersion and softness to many formulations. We have evaluated these in Lipstick, Lipgloss, Eye Shadow, Face Cream, Body Lotion, AP Stick and Gel, Hair Conditioning Gel, Moisture Sunscreen, Leave-In Hair Conditioners, Mousse Cosmetics and Mascaras.

**ELASTOMER AESTHETICS**

Property	Initial Feel	Cushion	Play Time	Final Feel
Silmer G-162	Dry Powdery	Good	Short	Dry Powdery
Silmer G-162A	Dry Powdery	More	Long	Waxy
Silmer G-162F	Dry Powdery	Less	Very Short	Slicker
Silmer G-162Q	Dry Powdery	Less	Short	Slick with transfer resistance

**Cushion**

Cushion is defined as the amount of material that remains between the finger and forearm when lightly pressed. Larger amounts of material, or greater distance between the finger and the forearm, are considered higher cushion. Honey has a large cushion because one feels a large amount of material between the finger and forearm, whereas water has little to no cushion because there is little material left between.

## **Playtime**

Playtime is defined as the length of time cushion persists while pressing. If the cushion is felt for a long period of time, the playtime is long. If the cushion collapses rapidly, the playtime is said to be short. In most compounds the cushion and playtime are directly related. In our example, honey has both a high cushion and high playtime.

To evaluate feel, one applies the elastomer to the index finger and then rubs into the forearm. The variations in the feel of these similar elastomers is attributed to the added alkyl functional silicones in each.

## **Silmer® G-162**

At first there is a distinct dry powdery initial feel with this standard elastomer. As the rubbing continues the cushion, is "short", as is the play time. Ultimately, the product has a ***dry feel***.

## **Silmer G-162A**

First, there is the characteristic dry powdery feel. As rubbing continues the cushion is increased over **Silmer G-162**. The **Silmer G-162A** also has a longer play time. Ultimately, **Silmer G-162A** has a ***waxy feel***.

## **Silmer G-162F**

After the characteristic dry powdery initial feel, the cushion is decreased relative to **Silmer G-162**. The **Silmer G-162F** has a very short play time. Ultimately, this elastomer has a ***slicker feel***.

## **Silmer G-162Q**

After the characteristic dry powdery initial feel, the cushion is decreased relative to **Silmer G-162**. The **Silmer G-162Q** has a short play time. Ultimately, the product has a ***slick feel***.

<b>Property</b>	<b>Initial Feel</b>	<b>Cushion</b>	<b>Play Time</b>	<b>Final Feel</b>
<b>Silmer G-162</b>	Dry Powdery	Good	Short	Dry Powdery
<b>Silmer G-162A</b>	Dry Powdery	More	Long	Waxy
<b>Silmer G-162F</b>	Dry Powdery	Less	Very Short	Slicker
<b>Silmer G-162Q</b>	Dry Powdery	Less	Short	Slick

## **SAFETY**

Before handling, read the Material Safety Data Sheet and container label for safe use, physical and health hazard information.

THIS MATERIAL IS NOT FOR MEDICAL OR DRUG USE.

## **STORAGE AND SHELF LIFE**

When stored in the original, unopened containers between 10 and 40°C, **Siltech G-162** products have a shelf life of 36 months from date of manufacture.

## **PACKAGING**

**Silmer G-162** products are available in 20kg and 180kg containers.

## **LEGAL DISCLAIMER**

Siltech Corporation believes that the information in this technical data sheet is an accurate description of the typical uses of the product. Siltech Corporation, however, disclaims any liability for incidental or consequential damages, which may result from the use of the product that are beyond its control. Therefore, it is the user's responsibility to thoroughly test the product in their particular application to determine its performance, efficacy and safety. Nothing contained herein is to be considered as permission or a recommendation to infringe any patent or any other intellectual property right.

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