

# SilDerm<sup>®</sup> Emulsifying BG

Increases Efficiency + Dispersion Aid + Natural Aesthetic

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Tomorrow's Vision... *Today!*<sup>®</sup>

# SilDerm<sup>®</sup> Emulsifying BG

## Technical Information:



**Code:** 30314

**INCI Nomenclature:** Butylene Glycol & Polymethylsilsesquioxane

**INCI Status:** Approved

**Suggested Use Level:** 0.5 - 15.0%

**Suggested Application:** Low Emulsifier Systems & Pigment Spacer

# Conditions Skin + Improves Texture

## Current Market Trends:



- Make-up with staying power occupies a significant place in the cosmetics market
- Consumers' perception:
  - long-wear make-up = dehydrated, cakey-looking skin
- The holy grail for long-wear cosmetics is to achieve:
  - Increased duration of make-up wear time
  - Maintain a healthy feel and look on the skin

# SilDerm® Emulsifying BG

## Science:

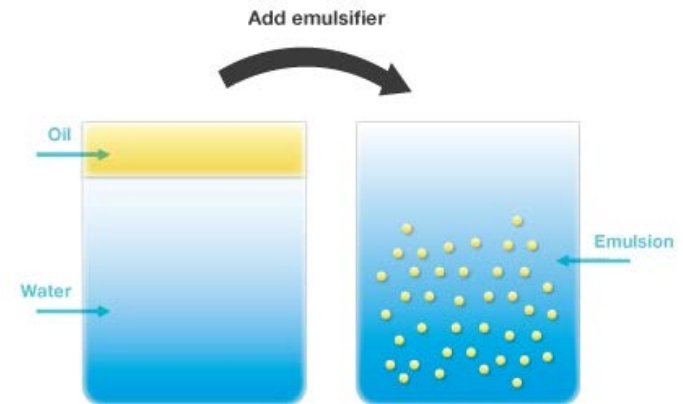


- **SilDerm® Emulsifying BG** is a dispersion of Polymethylsilsesquioxane (PMSQ) in Butylene Glycol
- Chemical formula  $[\text{CH}_3\text{SiO}_{3/2}]_n[\text{CH}_3\text{Si}(\text{OH})\text{O}_{3/2}]_m$
- PMSQ is a 3-dimensional matrix
  - Its surface is populated by methyl and hydroxyl groups
- By altering the ratio of methyl & hydroxyl groups, we are able to modify the amphiphilic characteristics of the particles
  - Creates unique behavior at the W/O or W/S interface
- This product is a primary emulsifier
  - Eliminates or reduces the need for other emulsifiers

# Why do You Need an Emulsifier?

## Science:

- Emulsifiers prevent the separation of ingredients & extend product storage life
- Agitation drives simple diffusion of particles across the interface
- As concentration increases, the particles search for thermodynamic stability, and begin collecting back at the interface
- The collection of particles at the interface prevents coalescence



# SilDerm® Emulsifying BG

## Production:



- SilDerm® Emulsifying BG is incorporated into the water phase
- Its particulate nature prevents it from disruption by high-shear/high-pressure processing
  - Depending on the formulation, rheological agents may be added to prevent creaming
  - Variation in electrolyte levels and pH may effect individual emulsions

# A Multitude of Applications

**SilDerm® Emulsifying BG's** 3-Dimensional structure allows it to interspace itself with the pigments preventing agglomeration



- ➔ Even more color development in decorative products
- ➔ More efficient UV absorbance for physical sunscreens
- ➔ Lack of soft agglomerates allow for sheer products with a more natural appearance

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## Benefits:

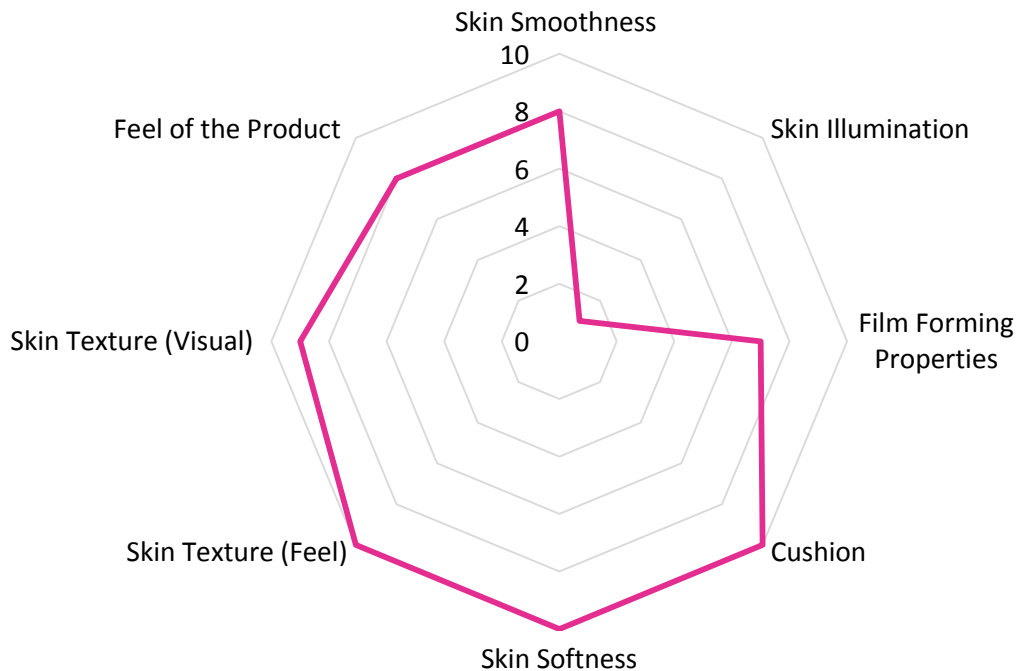
- ✓ Primary Emulsifier
- ✓ Improved Dispersion
- ✓ Improves Natural Appearance
- ✓ Increases Efficiency of Products





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## SilDerm<sup>®</sup> Emulsifying BG Evaluation



- **SilDerm<sup>®</sup> Emulsifying BG** has been evaluated for a number of tactile qualities in order to best understand its strengths, and the formulations it would be best suited for
- Very flexible in formulations
- Visually appealing as a raw
- Excellent cushion
- Film-forming properties

Figure 1. Overall product evaluation

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# ACTIVE CONCEPTS LLC

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Please visit and register to use our new website at

[www.activeconceptsllc.com](http://www.activeconceptsllc.com)

When you register, you will have access to the complete product documentation available.