

## BENTONE® LUXE DM

D5-free stabilising and emulsifying gel

### INCI NAME:

Dimethicone, PEG-10  
Dimethicone, Distearidimonium  
Hectorite, Tocopherol

### APPLICATION:

W/O & W/Si Emulsions

- Colour Cosmetics
- Skincare
- Suncare

### USE LEVEL:

3 - 10%

### SUSTAINABILITY CREDENTIALS:

- RSPO
- Vegan
- REACH

Unique chemistry,  
sustainable solutions

## BENTONE® LUXE DM

An all-in-one, D5-free stabilising and emulsifying gel for W/O and W/Si systems

BENTONE® LUXE DM introduces a new generation of clay-based thickening and emulsifying gel designed for water-in-oil and water-in-silicone systems. Built on our expertise in organically modified hectorite clay, this D5-free technology brings together rheology modification and emulsification in one elegant, high-performance material.

### Features and Benefits

#### • Thixotropic emulsion benefits

It creates highly stable thixotropic emulsions that resist phase separation while delivering a smooth, controlled application. Its shear thinning behaviour ensures effortless spreadability, improving both formulation robustness and end user experience.

#### • Light, elegant texture

With BENTONE® LUXE DM, formulations achieve lightweight, silky, non greasy textures that glide easily across the skin and absorb quickly. The result is an elegant, refined feel suited for high performance skin care and makeup products.

#### • Superior pigment dispersion

BENTONE® LUXE DM enhances both pigment and UV filter distribution. This translates into improved SPF performance, more uniform colour payoff, and long lasting visual stability, ideal for foundations, tints, sunscreens, and hybrid beauty formats.



#### • Cold process emulsification

BENTONE® LUXE DM is cold-processable, which reduces energy consumption and shortens production times, supporting more sustainable and cost efficient manufacturing.

#### • All-in-one solution

No additional emulsifiers or rheology modifiers are required, simplifying formulation development and reducing ingredient load.

#### • Robust performance

Delivering outstanding rheology control in W/Si systems, BENTONE® LUXE DM ensures consistent, stable performance even in challenging formats. As a D5 free solution, it supports regulatory readiness while maintaining the luxurious sensory profile consumers expect.



## BENTONE® LUXE DM

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emulsifying gel

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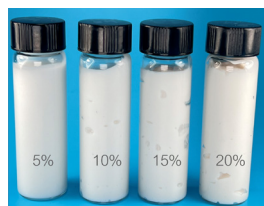
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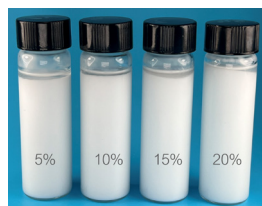
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## Concentration study

Formulation with  
BENTONE® LUXE DM



Formulation with  
PEG-10 Dimethicone only



Formulation with only PEG-10 DIMETHICONE shows separation at all use level, while formulation with BENTONE® LUXE DM shows no separation, indicating that the hectorite network enables formulation stability.

## Improved thermostability

Pop pink liquid blush with / without  
BENTONE® LUXE DM

40°C after 3 weeks



Pop pink liquid blush with / without  
BENTONE® LUXE DM

50°C after 2 weeks



The formulation on the left-hand side without BENTONE® LUXE DM shows separation already at 40°C, while the one with BENTONE® LUXE DM is stable even at 50°C after 2 weeks.

## Colour uniformity and vibrancy

Lip Cream with  
BENTONE® LUXE DM



ImageJ threshold mask\*

Lip Cream without  
BENTONE® LUXE DM



ImageJ threshold mask\*

\*Average pixel intensity measured by ImageJ on white fabric swatches.

Samples with BENTONE® LUXE DM appear deeper and more evenly coated, consistent with colorimetric data, and show consistently higher brightness compared to controls without BENTONE® LUXE DM (14% difference, p-value < 0.05) showing more uniform and saturated colour coverage.

## Formulation



### Pop Pink Liquid Blush

Based off WGSN 2027 Colours of the Year, Pop Pink, this liquid blush provides sheer yet buildable coverage to brighten your cheeks. BENTONE® LUXE DM is being utilised at 10% as the sole emulsifier in this cold process W/O Emulsion and improves pigment suspension, reduces the sedimentation of Titanium Dioxide, and improves thermostability shown in a temperature oscillation curve study.

### Phase A

|                                                                                                                      |       |
|----------------------------------------------------------------------------------------------------------------------|-------|
| Dimethicone (and) PEG-10 Dimethicone (and) Distearidimonium Hectorite ( <b>BENTONE® LUXE DM</b> ) <sup>1</sup>       | 10.00 |
| Dimethicone - 2 cs                                                                                                   | 7.57  |
| Polybutene (Panalane® H-300E) <sup>2</sup>                                                                           | 0.50  |
| Dimethicone (and) Dimethicone/Vinyl Dimethicone Crosspolymer (DOWSIL™ EL-9081 Silicone Elastomer Blend) <sup>3</sup> | 3.00  |
| Cetyl Ethylhexanoate (Bernel Ester CO) <sup>4</sup>                                                                  | 8.00  |
| Bis-Diglyceryl Polyacyladipate-2 (KahlComplex 6421 MB Supersoft) <sup>5</sup>                                        | 0.75  |
| Vinyl Dimethicone/Methicone Silsesquioxane Crosspolymer (KSP 101) <sup>6</sup>                                       | 2.00  |

### PHASE B

|                                                                                                                                     |      |
|-------------------------------------------------------------------------------------------------------------------------------------|------|
| Isononyl Isonanoate (Wickenol 151) <sup>4</sup>                                                                                     | 5.00 |
| Red 7 Lake (CI 15850)                                                                                                               | 0.15 |
| Synthetic wax (and) Blue 1 Lake (CI 42090) (FD&C Blue Al Lake Synthetic Wax Dispersion SWD SWD-4733) <sup>7</sup>                   | 0.33 |
| Titanium Dioxide (CI 77891) (and) Triethoxycaprylsilane (SunPURO® TES Silane Treated Titanium Dioxide C47 C47-A310TES) <sup>7</sup> | 3.00 |

### PHASE C

|                                                                       |       |
|-----------------------------------------------------------------------|-------|
| Deionized Water                                                       | 50.00 |
| Glycerin                                                              | 5.00  |
| Sodium Chloride                                                       | 0.50  |
| Phenoxyethanol (and) Ethylhexylglycerin (Euxyl® PE 9010) <sup>8</sup> | 1.00  |

### PHASE D

|                                                                                                              |      |
|--------------------------------------------------------------------------------------------------------------|------|
| Synthetic Fluorophlogopite (and) Titanium Dioxide (CI 77891) (SunSHINE® Super Red C81 C81-3230) <sup>7</sup> | 3.00 |
|--------------------------------------------------------------------------------------------------------------|------|

1 Elementis 2 Vantage 3 Dow 4 Alzo 5 KahlWax 6 Shin Etsu 7 Sun Chemical 8 Ashland