

Silsoft* E-Pearl Emulsion



MARKETING BULLETIN

SPECIALTY FLUIDS - PERSONAL CARE

Proposed INCI Name: Water (and) Polymethylsilsesquioxane (and) Dimethicone (and) Isohexadecane (and) Cetearyl Methicone (and) PEG-40 Stearate (and) Steareth-2 (and) Steareth-21

Silsoft E-Pearl emulsion is a patent-pending, non-ionic emulsion of polymethylsilsesquioxane powder, high molecular weight dimethicone and an alkyl-functionalized polysiloxane.

Silsoft E-Pearl emulsion is a multi-functional ingredient that has application in all kinds of skin care products; from facial masks to body washes and sun care products. It provides outstanding sensory, moist feel, line blurring and skin lightening benefits. Silsoft E-Pearl emulsion's multi-functionality is the result of the unique combination of its ingredients.

Silsoft E-Pearl emulsion is easy to use. *It can even be post-added to existing formulations!* Silsoft E-Pearl emulsion enables the formulator to give outstanding sensory to skin care products with high water content, *even when the product contains more than 90% water.*

Key Features and Typical Benefits

Key Features

- Extremely easy to use
- Cold processable
- Excellent dispersability in water
- Outstanding lubricity and spreadability
- Soft, smooth, silky feel
- Light diffusion effects
- Moisturizing properties of petrolatum/aesthetics of silicone

Typical Benefits

- Can be post-added to existing formulations
- Can be used in water-based cosmetics
- Superb application properties
- Excellent sensory
- Blurring of fine lines and wrinkles
- Moisturization with silicone feel



Typical Physical Properties

Appearance	Milky white
Viscosity, Pa·s	2-10
Solids, %	52-62

Typical properties are average data and are not to be used as or to develop specifications.

Potential Applications

- Facial Products

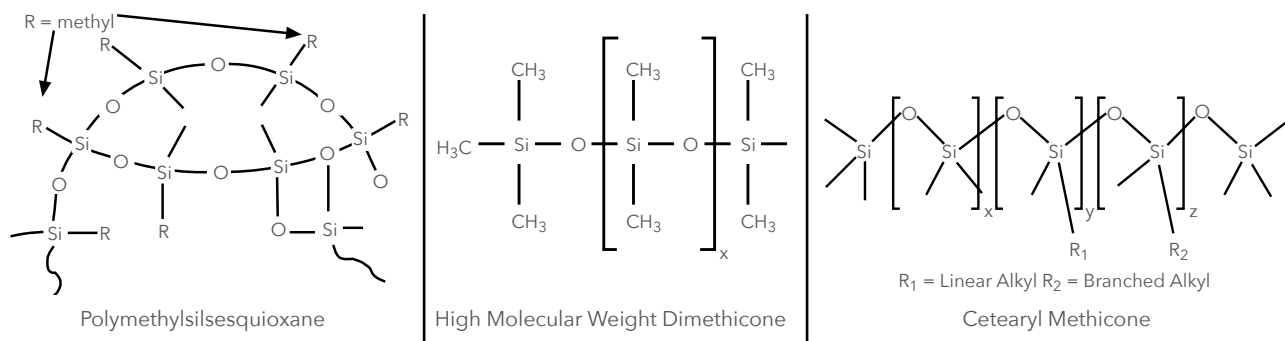
Masks	Toners	Cleansers
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- Suncare Products

Sunscreens	Daily wears
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- Body Washes
- Color Cosmetics

Foundations	Eye Shadows	Blushes
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- O/W Emulsions

Creams	Lotions	Protective Products
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Chemical Structures



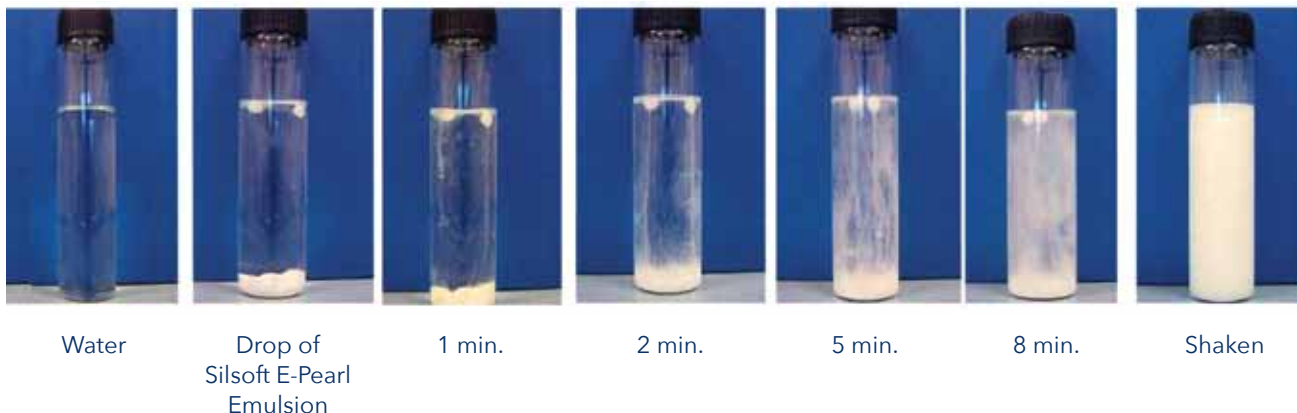
Silsoft E-Pearl emulsion is a patent-pending, non-ionic emulsion of polymethylsilsesquioxane powder, high molecular weight dimethicone and an alkyl-functionalized polysiloxane.

Formulation Guidelines

Silsoft E-Pearl emulsion can be easily dispersed in water simply by shaking.

Silsoft E-Pearl emulsion is easy to use. *It can even be post-added to existing formulations!* Silsoft E-Pearl emulsion enables the formulator to give outstanding sensory to skin care products with high water content, even with more than 90% water.

Recommended use level: 2-5%



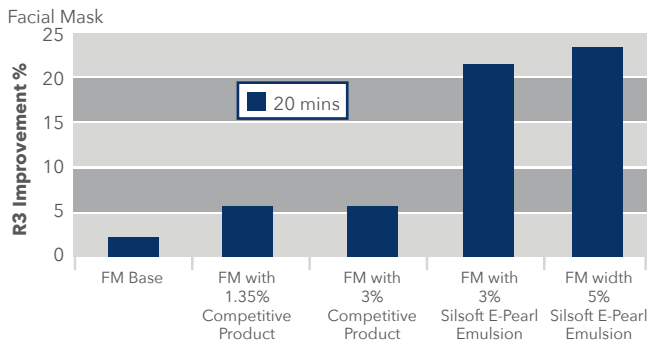
Performance Data

Application in Facial Mask

Silsoft E-Pearl Emulsion Benefits

- Easy to formulate – simply by shaking
- Outstanding smoothness
- Excellent softness
- Long-lasting sensory and moist feel
- Blurring of fine lines
- Good texture feel for facial mask sheet

Line Blurring Effect



Graph 1 : Line blurring effect of Silsoft E-Pearl emulsion
R3 = line depth; FM = facial mask

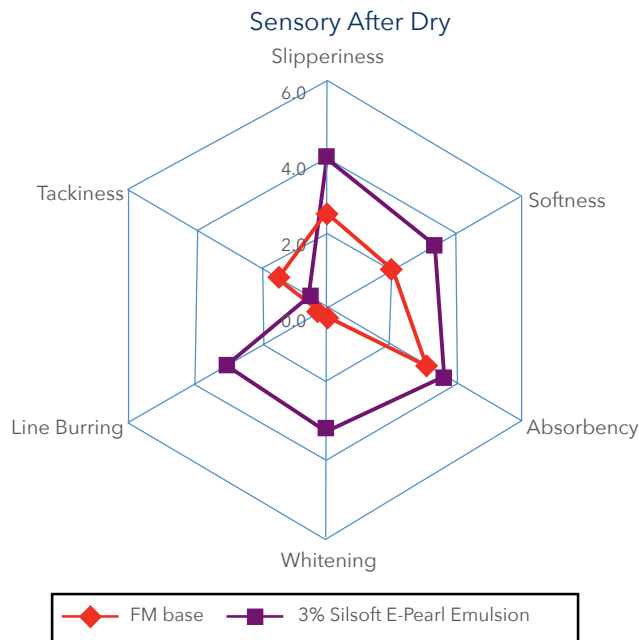
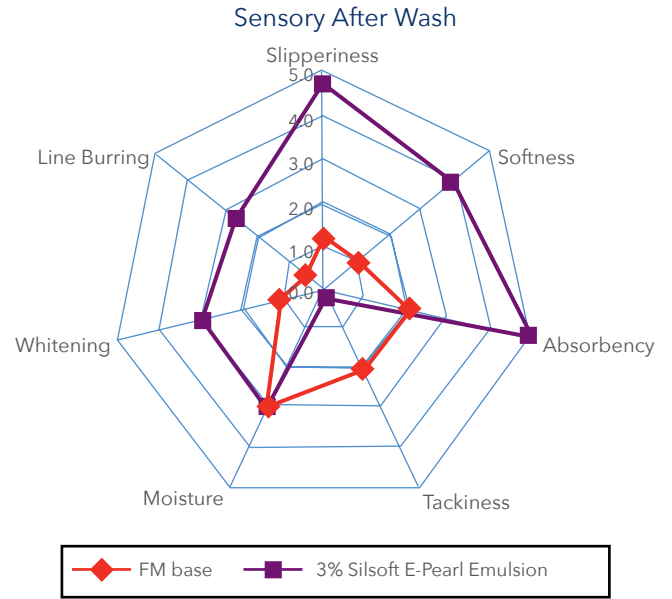
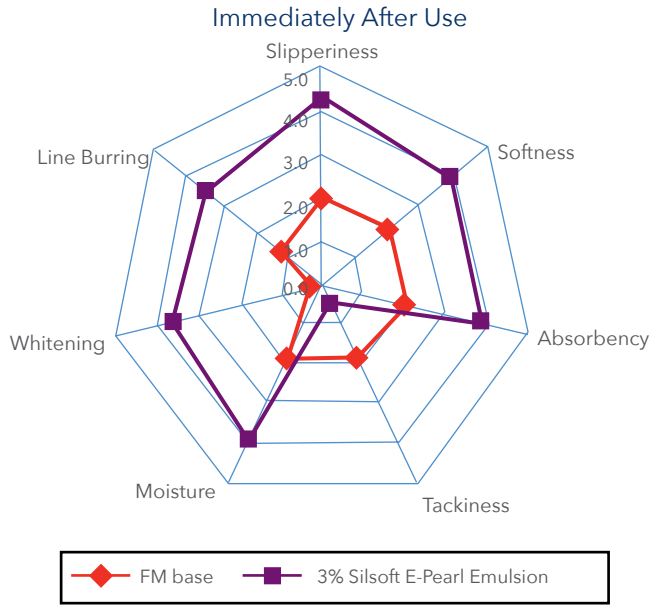
Facial Mask formula without and with Silsoft E-Pearl emulsion



Facial Mask Formula	FM Bass	FM with 3% Silsoft E-Pearl Emulsion
	%	%
Purified Water	to 100	to 100
Glycerine	7	7
1,3 Butylene Glycol	4	4
Silsoft E-Pearl Emulsion	0	3
Carbomer	0.15	0.15
Triethanolamine	0.15	0.15
Preservative	per label directions	per label directions

Performance Data (continued)

Sensory Enhancement: Facial Mask (FM)



Facial Mask Base + 3% Silsoft E-Pearl Emulsion

Enhanced:

- Softness and absorbency
- Line blurring
- Whiteness
- Slipperiness

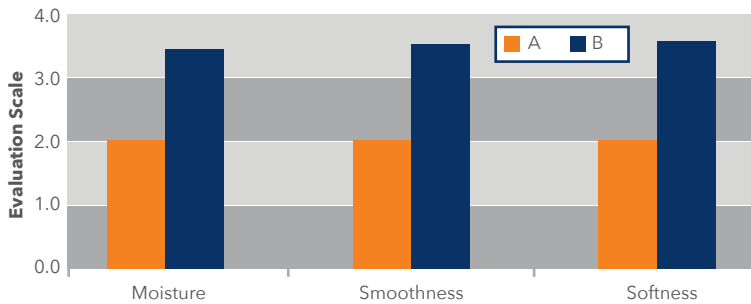
Reduced tackiness

Performance Data (continued)

Application in Shower Gel

	A	B
Purified Water	to 100	to 100
Sodium Laureth Sulfate (70%)	20.0	20.0
Cocoamidopropyl Betaine (30%)	5.0	5.0
Silsoft E-Pearl Emulsion	0.0	3.0
Carbomer	1.0	1.0
Polyquaternium-10	0.2	0.2
Sodium Hydroxide (18%)	1.5	1.5
Preservative	per label directions	per label directions

Shower Gel



A: Control Shower Gel Formula
 B: Shower Gel with 3% Silsoft E-Pearl emulsion

An in-house trained sensory panel preferred the formula with Silsoft E-Pearl emulsion because it enhanced skin’s moist feel, softness and smoothness.

Performance Data (continued)

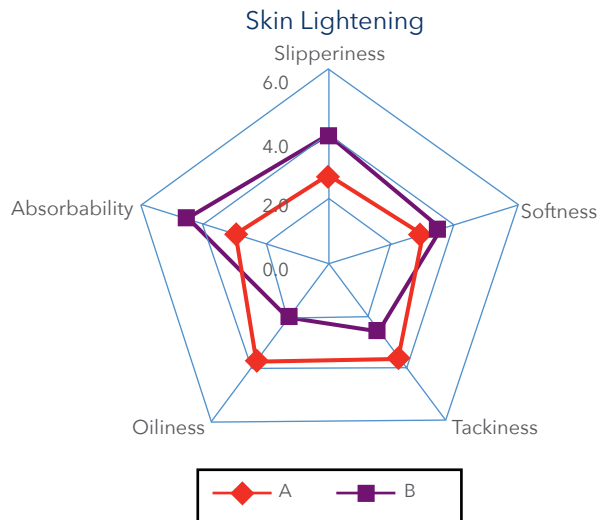
Application in Skin Lightening Sun Care Lotion

Ingredients	A	B
Oil Phase	w/w %	w/w %
POE (2) Stearyl Ether	2.00	2.00
POE (2) Stearyl Ether	1.50	1.50
Cyclopentasiloxane	3.00	3.00
Cyclopentasiloxane (and) C30-45 Alkyl Cetearyl Dimethicone Crosspolymer (Velvessil* 125 silicone network) ⁽¹⁾	5.00	5.00
Caprylyl Methicone (Silsoft 034 organosilicone fluid) ⁽¹⁾	3.00	3.00
Cyclopentasiloxane (and) Trimethylsiloxysilicate (SS4230) ⁽¹⁾	0.50	0.50
Tocopherol Acetate USP	0.30	0.30
TiO ₂	0.30	0.30
C ₁₂₋₁₅ Alkylbenzoate	0.60	0.60
Benzophenone-3	2.00	2.00
Octyl MethoxyCinnamate	4.00	4.00
Butylmethoxydibenzoylmethane	1.50	1.50
Water Phase		
Purified Water	67.58	62.58
Glycerin	5.00	5.00
Niacinamide	2.00	2.00
Panthenol	1.00	1.00
Na ₂ EDTA	0.08	0.08
Sodium Ascorbyl Phosphate	0.04	0.04
Carbomer	0.16	0.16
Arbutin ⁽³⁾	0.05	0.05
Germaben-IIIE ⁽²⁾	0.07	0.07
Triethanolamine NF	0.16	0.16
Fragrance	0.16	0.16
Silsoft E-Pearl Emulsion ⁽¹⁾	0.00	5.00

(1) Momentive Performance Materials

(2) ISP

(3) Zhong Shi chemical



A: Control Sun Care Lotion

B: Sun Care Lotion with 5% Silsoft E-Pearl emulsion

Silsoft E-Pearl emulsion can be post-added directly to any skin care finished product to deliver outstanding sensory benefits

Patent Status

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