

# Formulating the Future

**GUIDE FORMULATIONS** 



# About us

The KCC Corporation is a family owned business founded in 1958 that employs over 4,600 people in 17 countries. The company is headquartered in Seoul, South Korea and is a global leader in coatings and speciality chemicals. KCC is a proud, relatively new entrant to the silicones industry, with functional siloxane ingredients designed to meet the ever growing global demands for safe, effective and environmentally sound technology, with a strong focus on the personal care sector.

Basildon Chemicals is a UK based specialist manufacturer and formulator of silicone emulsions and silicone compounds for the personal care sector. Established in 1971, they are renowned as a company with a history of excellence in the emulsification of silicones. In April 2011, Basildon Chemicals was purchased by the KCC Corporation and, to this day, continue their focus on the consumer markets of food, pharmaceuticals and personal care.

# KCC Beauty, Formulating the Future

KCC Beauty brings together under one brand an exciting range of raw materials for Personal Care, based on the combined strengths of both KCC Silicones and Basildon Chemicals.

With personal care manufacturing and technical service centres in Korea and the UK, and a new plant in China; through the new brand KCC Beauty, we are well positioned to meet our customers' increasing needs for innovative technology and formulation support.

## Guide Formulation

#### Hair Care



#### **Colour Protect Shampoo** (OS-10)

The amino-functional emulsion SeraShine EM 301 (Amodimethicone (and) Trideceth-12 (and) Cetrimonium Chloride), is highly substantive to hair, therefore protecting hair from colour leaching when washing. It also leaves hair feeling soft, smooth and healthy.

Raw Material/INCI Name	% w/w	Trade name/Supplier	Function
Aqua (Water)	To 100	-	Vehicle
Glycerin	1.00	Surfac G995V/Surfachem	Dispersing Agent
Polyquaternium-10	0.20	Celquat SC230M/Azelis (Akzo Nobel)	Conditioning/Silicone Deposition Aid
Sodium Laureth Sulfate	25.00	Steol CS 230 KE/Surfachem (Stepan)	Anionic Surfactant
Sodium Lauryl Sulfate	15.00	Stepanol WA-Extra-E/Surfachem (Stepan)	Anionic Surfactant
Acrylates Copolymer	4.00	Carbopol Aqua SF-1/Surfachem (Lubrizol)	Suspending Agent
Cocamidopropyl Betaine	6.00	Surfac B4/Surfachem	Amphoteric Surfactant
Sodium Hydroxide	0.44	Sodium Hydroxide 32% Liquor/ Univar	pH Adjuster
Sodium Benzoate	0.30	Surfac Sodium Benzoate BP/ Surfachem	Preservative
Styrene Acrylates Copolymer (and) Aqua (and) Sodium Lauryl Sulfate	0.80	Lytron 180 AV/Azelis (Omnova)	Opacifier
Aqua (Water)	3.20		Vehicle
Salix Alba (and) Aqua (and) Propylene Glycol (and) Preservative	0.20	Willow Extract HG/Azelis (Provital)	Natural Extract
Amodimethicone (and) Trideceth-12 (and) Cetrimonium Chloride	4.00	SeraShine EM 301/KCC Beauty	Conditioning Agent
Parfum (Fragrance)	0.50	Big Hair Day Fragrance/Givaudan	Fragrance
Citric Acid	0.58	Surfac Citric Acid Mono BP/ Surfachem	pH Adjuster
Sodium Chloride	0.22	Sodium Chloride PVD/British Salt	Thickener

#### Typical Properties

Appearance: Opaque, white viscous liquid

Viscosity @ 25°C: 5000 - 7000cP (Brookfield RVT, Sp3, 10rpm)

pH@25°C: 4.5-4.8

#### Method

- · Add the water to the vessel and begin stirring.
- Premix the glycerin and the Celquat. Add to the batch and stir until dispersed.
- Add the surfactants and Carbopol. Adjust the pH to 6.50 7.50 with NaOH after addition of the Carbopol.
- Premix the Lytron and water and add to the batch.
- $\bullet \quad \text{Add the rest of the ingredients in order, stirring well between additions.}$
- · Check pH and viscosity and adjust as necessary.

## Guide Formulation Hair Care



#### Replenishing Hair Mask (IT-3)

This thick, creamy mask is ideal for coarse and/or frizzy hair. SeraSense RB 19 (Dimethicone (and) Trimethylsiloxysilicate) is an excellent de-frizzer and wards against humidity. SeraSense SA 31 (Glucamidopropyl Aminopropyl Dimethicone) is new to the KCC Beauty range. It is highly substantive to the hair, making it ideal for deep conditioning formulations.

Raw Material/INCI Name	% w/w	Trade name/Supplier	Function
Aqua (Water)	To 100		Vehicle
Glycerin	1.50	Surfac G995V/Surfachem	Dispersing Agent
Hydroxyethylcellulose	1.00	Natrosol 250 HHR-PC/Ashland	Thickener
Citric Acid	0.40	Surfac Citric Acid Mono BP/ Surfachem	pH Adjuster
Behentrimonium Chloride (and) Isopropyl Alcohol	2.50	Incroquat Behenyl TMC-85/ Croda	Conditioning Agent
Cetyl Alcohol	2.50	Crodacol C90/Croda	Bodifying Fat
Stearyl Alcohol	2.50	Crodacol S95/Croda	Bodifying Fat
Dimethicone (and) Trimethylsiloxysilicate	2.00	SeraSense RB 19/KCC Beauty	Anti-Frizz Agent
Glucamidopropyl Aminopropyl Dimethicone	1.00	SeraSense SA 31/KCC Beauty	<b>Conditioning Agent</b>
Camelina Sativa Seed Oil	0.20	Gold of Pleasure Oil/A&E Connock	Moisturising Extract
Methylisothiazolinone (and) Methylchloroisothiazolinone	0.07	Euxyl K120/Schülke	Preservative
Laurdimonium Hydroxypropyl Hyrolyzed Keratin (and) Aqua	1.00	Keramimic 2.0/Croda	Repairs Damaged Hair
Parfum (Fragrance)	0.50	Big Hair Day Fragrance/ Givaudan	Fragrance

#### Typical Properties

**Appearance:** White, viscous cream

Viscosity @ 25°C: 15000 - 30000cP (Brookfield Helipath, T Bar C, 10rpm)

pH@25°C: 3.0-4.0

- · Add the water to the vessel and being to heat.
- $\bullet$  Premix the glycerin and HEC and add to the water. The product should gel up at around 50°C.
- Continue to heat to 80-85°C.
- In a separate vessel, heat the fats to 80-85°C and add to the batch.
   Homogenise for 5 minutes until smooth.
- Cool to below 40°C and add the rest of the ingredients in order.
- · Check the viscosity and pH; adjust if necessary.

## Guide Formulation Hair Care



#### Super Shine Hair Serum (CC-12)

SeraSense SF DDM (Diphenyl Dimethicone) has a higher refractive index (1.505) than Phenyl Trimethicone (1.460), leaving hair even shinier. SeraSense RB 19 (Dimethicone (and)) Trimethylsiloxysilicate) is an excellent anti-frizz agent for coarse hair, with long lasting effects. SeraSense GB 11 (Cyclopentasiloxane (and) Dimethicone) is a gum blend which gives the product viscosity whilst smoothing the hair. SeraSense SF 2 (Dimethicone) can be used as an alternative solvent to Cyclopentasiloxane.

Raw Material/INCI Name	% w/w	Trade name/Supplier	Function
Cyclopentasiloxane (and) Dimethicone	84.00	SeraSense GB 11/KCC Beauty	Smoothes Hair
Diphenyl Dimethicone	3.00	SeraSense SF DDM/KCC Beauty	Glossing Agent
Dimethicone (and) Trimethylsiloxysilicate	3.00	SeraSense RB 19/KCC Beauty	Anti-Frizz Agent
Dimethicone	10.00	SeraSense SF 2/KCC Beauty	Solvent

# Typical Properties Appearance: Clear, colourless viscous liquid

Viscosity @ 25°C: 2500 - 3500cP (Brookfield RVT, Sp4, 10rpm)

pH@25°C: n/a

#### Method

· Mix the ingredients in order, stirring well between additions.

## Guide Formulation Hair Care



#### Anti-Frizz Curl Cream (CC-13)

This curl cream is light enough to be used on both wet and dry hair. SeraSense RB 19 (Dimethicone (and) Trimethylsiloxysilicate) is a resin blend which offers excellent anti-frizz properties and resistance to humidity. SeraSense GB10 (Cyclopentasiloxane (and) Dimethiconol) ensures the cream spreads easily over the hair, whilst smoothing.

Raw Material/INCI Name	% w/w	Trade name/Supplier	Function
Phase A			
Aqua (Water)	To 100		Vehicle
Polyquaternium-10	0.25	Celquat SC23OM/Azelis (Akzo Nobel)	Conditioning Agent
Glycerin	1.00	Surfac G995V/Surfachem	Humectant
Methylisothiazolinone (and) Methylchloroisothiazolinone	0.07	Euxyl K120/Schülke	Preservative
Phase B			
Cyclopentasiloxane (and) Dimethiconol	5.00	SeraSense GB 10/KCC Beauty	Smoothes Hair
Phenyl Trimethicone	3.00	SeraSense SF PTM/KCC Beauty	Glossing Agent
Dimethicone (and) Trimethylsiloxysilicate	0.50	SeraSense RB 19/KCC Beauty	Anti-Frizz Agent
Sodium Acrylate (and) Sodium Acryloyldimethyl Taurate Copolymer (and) Isohexadecane (and) Polysorbate 80	2.50	Simulgel EG/Seppic	Thickener
Phase C			
Parfum (Fragrance)	0.35	Big Hair Day Fragrance/ Givaudan	Fragrance
Santalum Album (Sandalwood) Extract (and) Phellodendron Amurense Bark Extract (and) Hordeum Distichon (Barley) Extract	0.50	Bois II/Protec Ingredia (Barnet)	Hydrates Hair

## Typical Properties Appearance: White, viscous gel-cream

Viscosity @ 25°C: 15000 - 25000cP (Brookfield Helipath, T Bar C, 10rpm) **pH@25°C:** 5.5 - 6.5

- Mix Phase A, stirring until homogenous.
- In a separate vessel, stir the ingredients of Phase B until homogenous.
- Add Phase B to A and homogenise for 5 minutes until smooth.
- Add Phase C to A+B.
- · Check pH and viscosity and adjust if necessary.

## Guide Formulation Hair Care



#### **Shining Moisture Coating Serum** (HJ13F 001)

The combination of gum blends in this lightweight serum allows easy absorption into the hair. SeraSense SF PTM (Phenyl Trimethicone) adds shine, and SeraSense SA 30 (Amodimethicone) is highly substantive, protecting the hair from heat damage.

Raw Material/INCI Name	% w/w	Trade name/Supplier	Function
Phase A			
Cyclopentasiloxane	To100	SeraSense SF CM5/KCC Beauty	Solvent
Cyclopentasiloxane (and) Dimethiconol	20.00	SeraSense GB 10/KCC Beauty	Smoothes Hair
Dimethicone (and) Dimethiconol	20.00	SeraSense GB 16/KCC Beauty	Smoothes Hair
Dimethicone	5.00	SeraSense SF 6/KCC Beauty	Softens Hair
Phenyl Trimethicone	2.00	SeraSense SF PTM/KCC Beauty	Glossing Agent
Amodimethicone	2.00	SeraSense SA 30/KCC Beauty	Heat Protection
Argania Spinosa (Argan) Kernal Oil	1.00	Argan Oil/OLVEA	Hair Moisturising Extract
Tocopheryl Acetate	0.10	Various	Antioxidant
Phase B			
Alcohol Denat.	4.00	Various	Solvent
Parfum (Fragrance)	q.s.	-	Fragrance

#### Typical Properties

Appearance: Clear, colourless liquid

Viscosity @ 25°C: 200 - 300cP (Brookfield LVDV II, LV-2, 6rpm)

pH@25°C: n/a

#### Method

- Mix the ingredients of Phase A until homogenous.
- In a separate vessel, mix Phase B and add to Phase A.

## Guide Formulation Hair Care/Skin Care



#### Hair & Body Wash for Men (HBW-1)

This simple hair & body wash utilises SeraSol SC 81 (PEG-12 Dimethicone) as a conditioning agent for skin and hair. This material is water-soluble and allows clear formulations. It also acts as a profoamer, helping to produce a dense, creamy foam.

Raw Material/INCI Name	% w/w	Trade name/Supplier	Function
Aqua (Water)	To 100		Vehicle
Acrylates/Palmeth-25 Acrylate Copolymer	6.00	Synthalen W2000/3V Sigma	Suspending Agent
Sodium Laureth Sulfate	39.29	Steol CS-230 KE/Surfachem (Stepan)	Anionic Surfactant
Sodium Lauryl Sulfate	10.00	Stepanol WA-Extra-E/Surfachem (Stepan)	Anionic Surfactant
Cocamidopropyl Betaine	7.35	Surfac B4/Surfachem	Amphoteric Surfactant
Polyquaternium-7	1.00	Surfac PQ-7/Surfachem	Conditioning Agent
Methylchloroisothiazolinone (and) Methylisothiazolinone (and) Aqua	0.07	Euxyl K120/Schulke	Preservative
PEG-12 Dimethicone	1.00	SeraSol SC 81/KCC Beauty	<b>Conditioning Agent</b>
Arctostaphylos uva-ursi (Bearberry) Leaf Extract	0.50	Cosflor Bearberry HG-1 (PS)/A&E Connock	Antibacterial Extract
Parfum (Fragrance)	1.00	Cool Metal 03 Fragrance/ Givaudan	Fragrance
Mica (and) CI 77499	0.05	Colorona Blackstar Red/Azelis (Merck)	Shimmer
Sodium Hydroxide	0.22	Sodium Hydroxide 32% Liquor/ Univar	pH Adjuster
Sodium Chloride	0.69	Sodium Chloride PVD/British Salt	Thickener

#### Typical Properties

Appearance: Clear, viscous liquid with red shimmer

Viscosity @ 25°C: 5000 - 7000cP (Brookfield RVT, Sp3, 10rpm)

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pH@25°C: 5.5-6.0

- · Add the water to the vessel and begin stirring.
- Add the Synthalen and surfactants. Check the clarity of the product if not clear then adjust the pH to 6.5-7.5.
- Add the rest of the ingredients in order, stirring well between each addition.
- Check the pH and viscosity and adjust accordingly.



#### Silky Body Wash (BW-1)

This luxurious mild body wash contains SeraSoft SW74 (Bis-PEG-18 Disiloxane) to boost foam creaminess. Both SeraSoft SW74 and SeraSoft SW70 (Stearyl Dimethicone) melt at body temperature and so give a smooth, soft feel to skin. The elastomer emulsion SeraSilk EM 601 (Dimethicone/Vinyl Dimethicone Crosspolymer (and) Cl2:14 Pareth-7) allows easy processing and leaves skin feeling powdery soft.

Raw Material/INCI Name	% w/w	Trade name/Supplier	Function
Aqua (Water)	To100	-	Vehicle
Glycerin	3.00	Surfac G995V/Surfachem	Humectant
Cocamidopropyl Betaine	15.00	Surfac B4/Surfachem	Amphoteric Surfactant
Sodium Lauryl Sulfoacetate (and) Disodium Laureth Sulfosuccinate	7.00	Stepan Mild LSB/Surfachem (Stepan)	Anionic Surfactant
Sodium Cocoyl Sarcosinate	30.00	Crodasinic CS30/Croda	Anionic Surfactant
Glyceryl Caprylate/Caprate	3.00	Stepan Mild GCC/Surfachem (Stepan)	Nonionic Surfactant
Acrylates Copolymer	8.00	Carbopol Aqua SF-1/Surfachem (Lubrizol)	Thickener/Suspending Agent
Sodium Hydroxide	1.00	Sodium Hydroxide Liquor 32%/ Univar	pH Adjuster
Stearyl Dimethicone	3.00	SeraSoft SW 70/KCC Beauty	Skin Feel
Bis-PEG-18 Disiloxane	3.00	SeraSoft SW 74/KCC Beauty	FoamDensifier/SkinFeel
Phenoxyethanol (and) Ethylhexylglycerin	1.00	Euxyl PE 9010/Schülke	Preservative
Dimethicone/Vinyl Dimethicone Crosspolymer (and) C12-14 Pareth-7	3.00	SeraSilk EM 601/KCC Beauty	Skin Feel
Aqua (Water)	4.00		Vehicle
Styrene Acrylates Copolymer (and) Aqua (and) Sodium Lauryl Sulfate	1.00	Lytron 180 AV/Azelis (Omnova)	Opacifier
Aqua (and) Avena Sativa (and) Glyceryl Stearate (and) PEG- 60 Hydrogenated Castor Oil (and) Phenoxyethanol (and) Methylparaben (and) Propylparaben (and) Butylparaben (and) Ethylparaben (and) Isobutylparaben	0.50	Oat Milk/Azelis (Provital)	Skin Moisturising Extract
Parfum (Fragrance)	1.00	Vitamin 131 Fragrance/Givaudan	Fragrance
Citric Acid	0.33	Surfac Citric Acid Mono BP/ Surfachem	pH Adjuster

#### Typical Properties

**Appearance:** Opaque white, viscous liquid

Viscosity @ 25°C: 5000 - 7000cP (Brookfield RVT, Sp3, 10rpm)

**pH@25°C:** 5.5 - 6.5

#### Method

- · Add the water to the vessel and begin stirring.
- Add the ingredients in order, stirring until homogenous. When the Carbopol has been added, adjust the pH to between 6.5 and 7.5.
- Melt the waxes gently (30 35°C is sufficient) and add to the batch.
- Premix the water and Lytron and add to the batch.
- Add the rest of the ingredients in order, stirring well between each addition.
- Check the pH and viscosity and adjust accordingly.

## Guide Formulation Skin Care



#### **Dual Phase Eye Make Up Remover** (EC-1)

This dual phase formulation blends together to remove all eye make up, including waterproof. SeraSense SF 2 (Dimethicone) cleanses oils away, whilst SeraSense SF CPM (Caprylyl Methicone) smoothes the eye area without tackiness.

Raw Material/INCI Name	% w/w	Trade name/Supplier	Function
Phase A			
Aqua (Water)	To 100	-	Vehicle
Disodium EDTA	0.10	Edeta BD/BASF	Chelating Agent
Poloxamer 184	0.50	Synperonic PE/L 64/Croda	Non-ionic Surfactant
CI 17200	0.000003	Pigment Red 33/A&E Connock	Pigment
Propanediol	10.00	Zemea/IMCD (DuPont)	Humectant
Methylisothiazolinone (and) Methylchlorothiazolinone	0.04	Euxyl K120/Schülke	Preservative
Glycerin (and) Aqua (and) Panthenol (and) Biotinoyl Tripeptide-1	2.00	Widelash/Sederma	Eyelash Conditioning/ Growth Booster
Sodium Hydroxide	q.s.	Sodium Hydroxide 32% Liquor/Univar	pH Adjuster
Phase B			
Dimethicone	15.00	SeraSense SF 2/KCC Beauty	Removes Waterproof Make Up
Isohexadecane	20.00	Arlamol HD/Croda	Emollient/Solvent
Caprylyl Methicone	5.00	SeraSense SF CPM/KCC Beauty	Skin Conditioning

## Typical Properties

Appearance: Water Phase: Clear pink, Oil Phase: Clear, Colourless Viscosity @ 25°C: n/a pH @ 25°C: 70 - 78

- · Mix the ingredients of Phase A until homogenous.
- In a separate vessel, mix the ingredients of Phase B until homogenous.
   Add Phase B to A with stirring.



## Moisture Facial Cream (SJ13F\_003)

This face cream is lightweight yet has a highly moisturising effect. SeraSense CM56 (Cyclopentasiloxane (and) Cyclohexasiloxane) gives a cooling effect and allows fast absorption. The blend of Dimethicone fluids provide a soft and velvety after feel. SeraSoft SW 72 (Bis-PEG-18 Methyl Ether Dimethyl Silane) is a soft wax which melts at body temperature, leaving the skin feeling moisturised.

Raw Material/INCI Name	% w/w	Trade name/Supplier	Function
Phase A			
Aqua (Water)	To 100	-	Vehicle
PEG-240/HDI Copolymer Bis- Decyltetradeceth-20 Ether	1.70	Adekanol GT-700/Asahi Denka	Gelling Agent
Disodium EDTA	0.02	Various	Chelating Agent
Dipotassium Glycyrrhizate	0.02	Various	Humectant
Allantoin	0.10	Various	Skin Conditioning
Glycerin	5.00	Various	Humectant
Butylene Glycol	3.00	Various	Humectant
Bis-PEG-18 Methyl Ether Dimethyl Silane	2.00	SeraSoft SW 72/KCC Beauty	Skin Moisturiser
Phase B			
Jojoba Esters	1.00	Floraesters 30/Floratech	Emollient
Squalane	4.00	Various	Emollient
Arachidyl Alcohol (and) Behenyl Alcohol (and) Arachidyl Glucoside	3.00	Montanov 202/Seppic	O/W Emulsifier
Phase C			
Dimethicone	0.50	SeraSense SF 100/KCC Beauty	Aids Water Repellency
Dimethicone	6.00	SeraSense SF 6/KCC Beauty	Smooth Feel
Cyclopentasiloxane (and) Cyclohexasiloxane	4.00	SeraSense SF CM56/KCC Beauty	Aids Spreading
Phase D			
Sodium Hyaluronate (and) Aqua	10.00	Various (1% Solution)	Skin Conditioning
Beta-Glucan	2.00	Various (0.4% Solution)	Skin Conditioning
Portulaca Oleracea (Purselane) Extract	3.00	Various	Skin Conditioning
Phase E			
Phenoxyethanol	0.30	Various	Preservative
Parfum (Fragrance)	q.s.		Fragrance

## Typical Properties

Appearance: White, viscous cream

Viscosity @ 25°C: >330000cP (Brookfield LVDV II, LV-4, 1rpm)

**pH@25°C:** 5.5 - 6.5

#### Method

- $\bullet \quad \text{Add the water to the vessel and being heating to 80-85°C. Add the rest of the ingredients in Phase A.}$
- In a separate vessel, mix the ingredients of Phase B and heat to 80-85°C.
- $\bullet \quad \text{Add Phase C to Phase B and mix until homogenous, maintaining temperature.} \\$
- Add Phase B+C to Phase A and homogenise for 5 minutes until smooth.
- Cool to <50°C and add Phase D. Homogenise for 3 minutes.
- · Cool to room temperature and check pH and viscosity.

## Guide Formulation Skin Care



#### Moisture Gel for Men (SJ13F 004)

This oil and alcohol-free formulation gives a cool feeling to skin. SeraSense EM 61 (Dimethicone (and) Dimethicone/Vinyl Dimethicone Crosspolymer) smoothes the skin, without feeling tacky, also reducing pore size. SeraSense SF CM5 (Cyclopentasiloxane) aids spreading of the gel.

Raw Material/INCI Name	% w/w	Trade name/Supplier	Function
Phase A			
Aqua (Water)	To 100		Vehicle
Disodium EDTA	0.02	Various	Chelating Agent
Dipotassium Glycyrrhizate	0.02	Various	Humectant
Allantoin	0.10	Various	Skin Conditioning
Glycerin	5.00	Various	Humectant
Dipropylene Glycol	3.00	Various	Humectant
Biosaccharide Gum-1	3.00	Fucogel 1.5P/Solabia	Skin Conditioning
Glycereth-26	2.00	Liponic EG-1/Lipo Chemical	Humectant
Sodium Hyaluronate (and) Aqua	10.00	Various (1% Solution)	Skin Conditioning
Portulaca Oleracea (Purselane) Extract	3.00	Various	Skin Conditioning
PEG-11 Methyl Ether Dimethicone	1.00	SeraSol SC 85/KCC Beauty	O/W Co-Emulsifier
Phase B			
Dimethicone	1.00	SeraSense SF 100/KCC Beauty	Aids Water Repellency
Dimethicone (and) Dimethicone/ Vinyl Dimethicone Crosspolymer	3.00	SeraSilk EM 61/KCC Beauty	Silky Feel
Cyclopentasiloxane	3.00	SeraSense SF CM5/KCC Beauty	Aids Spreading
Phase C			
PEG-60 Hydrogenated Castor Oil	0.40	HCO-60/Nikko	Co-Emulsifier
Phenoxyethanol	0.30	Various	Preservative
Parfum (Fragrance)	q.s.		Fragrance
Phase D			
Hydroxyethyl Acrylate/Sodium Acryloyldimethyl Taurate Copolymer (and) Squalane (and) Polysorbate 60	2.00	Simulgel NS/Seppic	Thickener
Parfum (Fragrance)	q.s.		Fragrance

#### Typical Properties

Appearance: White, viscous gel-cream

Viscosity @ 25°C: >45000cP (Brookfield LVDV II, LV-4, 6rpm)

pH@25°C: 5.5-6.5

- Mix the ingredients of Phase A until homogenous.
- In a separate vessel, mix the ingredients of Phase B. Add Phase B to Phase A and homogenise for 5 minutes.
- Premix Phase C and add to A+B.
- Add Phase D.
- · Check pH and viscosity.



## **Hydra Gel Cream (Water Drop)** (SJ13F\_006)

This super-hydrating cream is lightweight giving a cool, watery feeling. SeraSol EL 92 (Dimethicone (and) Dimethicone/PEG-10/15 Crosspolymer) is brand new to the KCC Beauty range. It is an emulsifying elastomer, making it extremely stable. SeraSense SF 6 (Dimethicone) leaves skin feeling moisturised and soft

Raw Material/INCI Name	% w/w	Trade name/Supplier	Function
Phase A			
Dimethicone (and) Dimethicone/PEG-10/15 Crosspolymer	3.00	SeraSol EL 92/KCC Beauty	W/O Emulsifier
Cyclopentasiloxane	5.00	SeraSense CM5/KCC Beauty	Fast Absorption
Dimethicone	5.00	SeraSense SF 6/KCC Beauty	Aids Spreading/ Moisturising
Phase B			
Aqua (Water)	To 100	-	Vehicle
Glycerin	5.00	Various	Humectant
Dipropylene Glycol	3.00	Various	Humectant
Portulaca Oleracea (Purselane) Extract	3.00	Various	Skin Conditioning
Sodium Chloride	0.80	Various	Emulsion Stabiliser
Phase C			
Phenoxyethanol	0.30	Various	Preservative
Parfum (Fragrance)	q.s.		Fragrance

## Typical Properties

Appearance: White, viscous cream

Viscosity @ 25°C: >60000cP (Brookfield LVDV II, LV-4, 6rpm)

**pH@25°C:**n/a

#### Method

- Mix the ingredients of Phase A until homogenous.
- In a separate vessel, mix the ingredients of Phase B, then add to Phase A.
- Add the ingredients of Phase C, stirring until homogenous.
- · Check pH and viscosity.

## Guide Formulation Skin Care



#### **Tightening Serum Crème** (AA-3)

The elastomer in this serum crème, SeraSilk EL.64 (Dimethicone (and) Dimethicone/Vinyl Dimethicone Crosspolymer) gives the skin a luxurious feel, leaving it powdery soft. SeraSense GB 12 (Dimethicone (and) Dimethiconol) aids skin smoothness and SeraSense SF PTM (Phenyl Trimethicone) helps the lotion to spread easily.

Raw Material/INCI Name	% w/w	Trade name/Supplier	Function
Aqua (Water)	To 100		Vehicle
Propanediol	5.00	Zemea/IMCD (DuPont)	Humectant
Sorghum Bicolor Stalk Juice (and) Water (Aqua) (and) Sodium Polystyrene Sulfonate (and) Glycerin	7.00	Dynalift/Sederma	Tightens skin
Phenoxyethanol (and) Ethylhexylglycerin	1.00	Euxyl PE 9010/Schülke	Preservative
Dimethicone (and) Dimethicone/Vinyl Dimethicone Crosspolymer	10.00	SeraSilk EL 64/KCC Beauty	Skin feel
Dimethicone (and) Dimethiconol	2.50	SeraSense GB 12/KCC Beauty	Skin feel
Phenyl Trimethicone	3.00	SeraSense SF PTM/KCC Beauty	Aids spreading
Salvia Hispanica (Chia) Seed Oil	2.00	Seatons Chia Seed Oil/Seatons	Source of Omega 3
Papaveris Somniferum (Poppy) Seed Oil	2.00	Seatons Poppy Seed Oil/Seatons	Moisturises skin
Parfum (Fragrance)	0.80	Vitamin 131 Fragrance/Givaudan	Fragrance
Sodium Polyacrylate (and) Ethylhexyl Cocoate (and) PPG-3 Benzyl Ether Myristate (and) Polysorbate 20	4.00	ViscOptima SE/Croda	Thickener/Emulsifier

## Typical Properties

**Appearance:** Cream coloured, viscous liquid **Viscosity @ 25°C:** 20000 - 40000cP (Brookfield RVT, Sp4, 2.5rpm)

**pH@25°C:** 5.5 - 6.0

- · Add the water to the vessel and begin stirring.
- · Add the ingredients in order up to the silicones.
- Premix the silicones until smooth, and then add to the batch.
- $\bullet \quad \text{Add the rest of the ingredients in order. Once the ViscOptima has been added, a cream will form.}\\$
- Homogenisation may be required to fully blend in the elastomer gel.
- Check the pH and viscosity and adjust accordingly.



#### **36.5°C Melting Rich Cream** (SJ13F\_005)

This cream has a unique texture – it melts on contact with skin. SeraSoft SW 70 (Stearyl Dimethicone) also has this feature, leaving the skin soft and smooth, with a nourished feeling. SeraSilk EL 60 (Cyclopentasiloxane (and) Dimethicone/Vinyl Dimethicone Crosspolymer) creates a luxurious silky after feel.

Raw Material/INCI Name	% w/w	Trade name/Supplier	Function
Phase A			
Synthetic Wax	6.00	Sasolwax C80/Sasol	Emulsion Stabiliser
Stearyl Dimethicone	2.00	SeraSoft SW 70/KCC Beauty	Soft/Nourished Feel
Olus (Vegetable) Oil	0.50	Cremerlin Pura/Cremer Oleo	Emollient
Polyglyceryl-4 Isostearate	1.00	Isolan GI 34/Evonik	W/O Emulsifier
Cetyl PEG/PPG-10/1 Dimethicone	1.50	SeraSol SC 83/KCC Beauty	W/O Emulsifier
Cyclopentasiloxane (and) Dimethicone/Vinyl Dimethicone Crosspolymer	10.00	SeraSilk EL 60/KCC Beauty	Silky Feel
Cyclopentasiloxane	17.00	SeraSense SF CM5/KCC Beauty	Aids Spreading
Dimethicone	5.00	SeraSense SF 6/KCC Beauty	Smooth Feel
Mica (and) Titanium Dioxide	0.70	Flamenco Red 420C/BASF	Pigment
Phase B			
Aqua (Water)	To 100	-	Vehicle
Sodium Chloride	1.00	Various	Emulsion Stabiliser
Glycerin	8.00	Various	Humectant
Butylene Glycol	6.00	Various	Humectant
Phase C			
Phenoxyethanol	0.40	Various	Preservative
Parfum (Fragrance)	q.s.	-	Fragrance

#### Typical Properties

Appearance: White solid (melts at body temperature)
Viscosity @ 25°C: n/a
pH@ 25°C: n/a

#### Method

- Mix the ingredients of Phase A until homogenous, heat to 80-85°C.
- In a separate vessel, mix the ingredients of Phase B, heat to 80-85°C. Add Phase B to Phase A, homogenise for 5 minutes.
- Cool to below <40°C and add Phase C.
- · Check pH and viscosity.

## Guide Formulation Skin Care



#### Long Lasting Hand Cream (BJ13F 002)

 $SeraSense\ SF\ CM56\ (Cyclopentasiloxane\ (and)\ Cyclohexasiloxane)\ within\ this\ hand\ cream\ gives\ a\ cooling\ effect\ and\ allows\ fast\ absorption.\ The\ silicone\ blend\ also\ helps\ to\ give\ water\ repellency\ and\ a\ smooth\ feel.\ SeraSense\ GB\ 16\ (Dimethicone\ (and)\ Dimethiconol)\ leave\ the\ hands\ with\ long\ lasting\ moisture.$ 

Raw Material/INCI Name	% w/w	Trade name/Supplier	Function
Phase A			
Aqua (Water)	To 100	-	Vehicle
Disodium EDTA	0.02	Various	Chelating Agent
Allantoin	0.10	Various	Skin Protecting
Glycerin	10.00	Various	Humectant
Beta-Glucan	2.00	Various (0.4% Solution)	Skin Conditioning
Phase B			
Jojoba Esters	3.00	Floraesters 30/Floratech	Emollient
C14-22 Alcohols (and) C12-20 Alkyl Glucoside	3.00	Montanov L/Seppic	O/W Emulsifier
Cetearyl Alcohol	1.00	Lanette O/Cognis	Bodifying Fat
Tocopheryl Acetate	0.10	Various	Antioxidant
Phase C			
Dimethicone (and) Dimethiconol	1.20	SeraSense GB 16/KCC Beauty	Long Lasting Moisture
Dimethicone	1.00	SeraSense SF 100/KCC Beauty	Aids Spreading/ Moisturising
Dimethicone	4.00	SeraSense SF 6/KCC Beauty	Aids Spreading/ Moisturising
Cyclopentasiloxane (and) Cyclohexasiloxane	4.00	SeraSense SF CM56/KCC Beauty	Cooling Effect/Fast Absorbing
Phase D			
Polyacrylate-13 (and) Polyisobutene (and) Polysorbate 20	2.00	Sepiplus 400/Seppic	Thickener
Phenoxyethanol	0.30	Various	Preservative
Parfum (Fragrance)	Q.S.		

#### Typical Properties

Appearance: White, viscous cream

Viscosity @ 25°C: >500000cP (Brookfield LVDV II, LV-4, 1rpm)

pH@25°C: 5.2-6.2

- Add the water to the vessel and begin heating to 80-85°C. Add the rest of the ingredients in Phase A.
- In a separate vessel, mix the ingredients of Phase B and heat to 80-85°C.
- Add Phase C to Phase B and mix until homogenous, maintaining temperature.
- Add Phase B+C to Phase A and homogenise for 5 minutes until smooth.
- Cool to <50°C and add Phase D. Homogenise for 3 minutes.
- · Cool to room temperature and check pH and viscosity.



#### Daily Sun Protection Cream (SPF30, PA++) (SUJ13F\_008)

This light-feeling, waterproof sunscreen can also be used as a make-up base. SeraSense SF CM5 (Cyclopentasiloxane) allows fast absorption and a cool feeling. SeraSense SF 6 (Dimethicone) aids spreading and leaves the skin feeling moisturised. SeraSilk EL 61 (Dimethicone (and) Dimethicone/Vinyl Dimethicone Crosspolymer) gives the skin a silky smooth feel.

Raw Material/INCI Name	% w/w	Trade name/Supplier	Function
Phase A			
Cyclopentasiloxane	10.00	SeraSense SF CM5/KCC Beauty	Cool Feeling/Fast Absorption
Phenyl Trimethicone	3.00	SeraSense SF PTM/KCC Beauty	Brightening Effect
Dimethicone	4.00	SeraSense SF 6/KCC Beauty	Aids Spreading
Disteardimonium Hectorite	1.00	Bentone 38V/Elementis Specialities	Thickener
Ethylhexylmethoxycinnamate	7.00	Uvinul MC-80/BASF	UVB Absorber
Ethylhexyl Salicylate	4.50	Parsol EHS/DSM	UVB Absorber
Pigment Base	1.00	Various	Pigment
Mica (and) Titanium Dioxide	1.50	Flamenco Red 420C/BASF	Pigment
Titanium Dioxide (and) Aluminium Hydroxide (and) Stearic Acid (and) Cyclopentasiloxane (and) PEG-10 Dimethicone	5.00	ChoiceTitan 40/Choice Trade	UV Absorber
PEG-10 Dimethicone	3.00	SeraSol SC 86/KCC Beauty	W/O Emulsifier
Dimethicone (and) Dimethicone/Vinyl Dimethicone Crosspolymer	2.00	SeraSilk EL 61/KCC Beauty	Silky Feel
Cetyl Ethylhexanoate	4.00	CEH/Kokyu Alcohol	Emollient
Phase B			
Aqua (Water)	To 100		Vehicle
Dipropylene Glycol	5.00	Various	Humectant
Portulaca Oleracea (Purselane) Extract	3.00	Various	Skin Conditioning
EXIIaCi			
Sodium Chloride	1.00	Various	Emulsion Stabiliser
	1.00	Various	Emulsion Stabiliser
Sodium Chloride	1.00	Various Various	Emulsion Stabiliser  Preservative
Sodium Chloride  Phase C			

#### Typical Properties

Appearance: White, viscous cream

Viscosity @ 25°C: >25000cP (Brookfield LVDV II, LV4, 6rpm)

pH @ 25°C: n/a

#### Method

- · Mix the ingredients of Phase A until homogenous.
- In a separate vessel, mix the ingredients of Phase Buntil homogenous. Add Phase B to A with stirring.
- · Slowly add Phase C to A+B, with stirring.
- · Check viscosity.

## Guide Formulation Skin Care



#### **Instant Wrinkle Corrector** (SJ13F 007)

The wrinkle reduction effect comes from a brand new product to the KCC Beauty range - SeraSense SP 13 (Dimethicone/Vinyl Dimethicone Crosspolymer). This is an easily dispersed powder which creates a soft focus effect and leaves the skin incredibly silky and smooth.

Raw Material/INCI Name	% w/w	Trade name/Supplier	Function
Phase A			
Dimethicone/Vinyl Dimethicone Crosspolymer	22.00	SeraSnow SP 13/KCC Beauty	Wrinkle Filling/Soft Focus Effect
Phenyl Trimethicone	6.00	SeraSense SF PTM/KCC Beauty	Aids Spreading
Cyclopentasiloxane	To 100	SeraSense CM5/KCC Beauty	Aids Absorption/Cool Feeling
Tocopheryl Acetate	0.10	Various	Antioxidant
Phase B			
Mica (and) Titanium Dioxide	0.50	Flamenco Red 420C/BASF	Pigment
Parfum (Fragrance)	q.s.	-	Fragrance
Aqua (and) Butylene Glycol (and) Sodium Bicarbonate (and) Xanthan Gum Crosspolymer (and) Hydroxyethylcellulose	1.00	Quicklift/BASF	Skin Lifting

#### Typical Properties

Appearance: Hazy, viscous gel

Viscosity @ 25°C: >750000cP (Brookfield HBDV II, Sp6, 1rpm) pH @ 25°C: n/a

- Premix the ingredients of Phase A.
- In the main vessel, add the ingredients of Phase B and mix until homogenous.
- Add Phase A to B and mix until homogenous.
- · Check viscosity.

## Guide Formulation Skin Care/Colour Cosmetics



#### **Pore Cover Shining Primer** (MJ13F 009)

This Pore Cover Primer can be used before or after application of foundation. SeraSilk EL 63 (Cyclopentasiloxane (and) Dimethicone/Vinyl Dimethicone Crosspolymer) gives excellent pore cover and a velvety-soft feel. SeraSense SF 6 (Dimethicone) aids spreading of the product and leaves the skin feeling moisturised. SeraSense SF PTM (Phenyl Trimethicone) brightens the skin, giving a youthful appearance.

Raw Material/INCI Name	% w/w	Trade name/Supplier	Function
Phase A			
Cyclopentasiloxane (and) Cyclohexasiloxane	4.00	SeraSense SF CM56/KCC Beauty	Fast Absorption
Phenyl Trimethicone	3.00	SeraSense SF PTM/KCC Beauty	<b>Brightening Effect</b>
Dimethicone	6.00	SeraSense SF 6/KCC Beauty	Aids Spreading/ Moisturising
PEG-10 Dimethicone	1.00	SeraSol SC 86/KCC Beauty	W/O Emulsifier
Dimethicone (and) Dimethicone/PEG-10/15 Crosspolymer	3.00	SeraSol EL 92/KCC Beauty	W/O Emulsifier
Cyclopentasiloxane (and) Dimethicone/Vinyl Dimethicone Crosspolymer	5.00	SeraSilk EL 63/KCC Beauty	Pore Cover
Tocopheryl Acetate	0.10	Various	Antioxidant
Mica (and) Titanium Dioxide	4.00	Flamenco Red 420C/BASF	Pigment
Phase B			
Aqua (Water)	To 100		Vehicle
Dipropylene Glycol	3.00	Various	Humectant
Glycerin	5.00	Various	Humectant
Sodium Chloride	1.00	Various	Emulsion Stabiliser
Phase C			
Phenoxyethanol	0.30	Various	Preservative
Caprylhydroxamic Acid (and) Caprylyl Glycol (and) Glycerin	0.30	Spectrastat/Inolex	Preservative
Parfum (Fragrance)	q.s.		Fragrance

#### Typical Properties

Appearance: White, viscous cream

Viscosity @ 25°C: >40000cP (Brookfield LVDV II, LV4, 6rpm)

pH@25°C:n/a

#### Method

- Mix the ingredients of Phase A until homogenous.
- In a separate vessel, mix the ingredients of Phase B until homogenous. Add Phase B to A with stirring.
- Slowly add Phase C to A+B, with stirring.
- · Check viscosity.

## Guide Formulation Skin Care/Colour Cosmetics Silk Touch CC Cream (MJ13F 010)



CC (Complete Correction) Creams are the new BB Creams! This formulation is a blend of skincare and make up, with a light, natural feel and radiance effect. SeraSilk EL 63 (Cyclopentasiloxane (and) Dimethicone/Vinyl Dimethicone Crosspolymer) gives skin a powdery soft feel and soft-focus effect. SeraSol SC 86 (PEG-10 Dimethicone) and SeraSol EL 92 (Dimethicone (and) Dimethicone/PEG-10/15 Crosspolymer) have a strong synergistic W/O emulsifying effect.

Raw Material/INCI Name	% w/w	Trade name/Supplier	Function
Phase A			
Cyclopentasiloxane (and) Cyclohexasiloxane	4.00	SeraSense SF CM56/KCC Beauty	Fast Absorption
Phenyl Trimethicone	4.00	SeraSense SF PTM/KCC Beauty	Brightening Effect
Dimethicone	6.00	SeraSense SF 6/KCC Beauty	Aids Spreading/ Moisturising
PEG-10 Dimethicone	2.00	SeraSol SC 86/KCC Beauty	W/O Emulsifier
Dimethicone (and) Dimethicone/ PEG-10/15 Crosspolymer	2.00	SeraSol EL 92/KCC Beauty	W/O Emulsifier
Cyclopentasiloxane (and) Dimethicone/Vinyl Dimethicone Crosspolymer	1.00	SeraSilk EL 63/KCC Beauty	Pore Cover
Squalane	4.00	Various	Emollient
Pigment Base	6.00	Various	Pigment
Mica (and) Titanium Dioxide	4.00	Flamenco Red 420C/BASF	Pigment
Phase B			
Aqua (Water)	To 100	-	Vehicle
Dipropylene Glycol	3.00	Various	Humectant
Glycerin	5.00	Various	Humectant
Sodium Hyaluronate (and) Aqua (Water)	5.00	Various (1% Solution)	Skin Conditioning
Portulaca Oleracea (Purselane) Extract	3.00	Various	Skin Conditioning
Sodium Chloride	1.00	Various	Emulsion Stabiliser
Phase C			
Phenoxyethanol	0.40	Various	Preservative
Caprylhydroxamic Acid (and) Caprylyl Glycol (and) Glycerin	0.40	Spectrastat/Inolex	Preservative
Parfum (Fragrance)	Q.S.		Fragrance

#### Typical Properties

Appearance: Beige, viscous cream

Viscosity @ 25°C: >12000cP (Brookfield LVDV II, LV4, 10rpm)

pH@25°C: n/a

- Mix the ingredients of Phase A until homogenous.
- $\bullet \quad \text{In a separate vessel, mix the ingredients of Phase Buntil homogenous. Add Phase B to A with stirring.}\\$
- Slowly add Phase C to A+B, with stirring.
- · Check viscosity.

## Guide Formulation

#### Colour Cosmetics



#### Cream Blush (CC-B-1)

This Cream Blush is based on the elastomer SeraSilk EL 60 (Cyclopentasiloxane (and) Dimethicone/Vinyl Dimethicone Crosspolymer), which adds viscosity and a powdery soft feel to the formulation. Upon application, the cream melts into the skin, spreading easily thanks to the addition of SeraSense SF PTM (Phenyl Trimethicone). SeraSense RB 19 (Dimethicone (and) Trimethylsiloxysilicate) is a resin which aids long lasting colour.

Raw Material/INCI Name	% w/w	Trade name/Supplier	Function
Cyclopentasiloxane (and) Dimethicone/Vinyl Dimethicone Crosspolymer	73.27	SeraSilk EL 60/KCC Beauty	Skin Feel/Viscosity Modifier
Isononyl Isononanoate	4.80	Lanol 99/Seppic	Emollient
Phenyl Trimethicone	1.00	SeraSense SF PTM/KCC Beauty	Aids Spreading
Cyclopentasiloxane	9.85	SeraSense SF CM5/KCC Beauty	Solvent
Mica (and) CI 77891 (and) CI 75470	7.34	Colorona Carmine Red/Azelis (Merck)	Pigment
CI 77491 (and) Silica	0.74	Xirona Le Rouge/Azelis (Merck)	Pigment
Dimethicone (and) Trimethylsiloxysilicate	2.50	SeraSense RB 19/KCC Beauty	Aids Pigment Adhesion
Rubus Idaeus (Raspberry) Seed Oil	0.50	Seatons Raspberry Seed Oil/ Seatons	Skin Nourishing Oil

#### Typical Properties

**Appearance:** Pink, viscous cream

Viscosity @ 25°C: >120000cP (Brookfield RVT, Sp6, 2.5rpm)

pH@25°C:n/a

#### Method

- Add the SeraSilk EL 60 to the main vessel along with the Lanol 99. Stir until homogenous.
- Premix the pigments with the SeraSense SF PTM and CM5. Add to the batch.
- · Add the rest of the ingredients in order, stirring until homogenous.

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Inolex Elementis Specialities

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IMCD Choice Trade Floratech Kokyu Alcohol Our Speciality Silicone products deliver sensory excellence to haircare, skincare, and colour cosmetic formulations.



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