

**Dow**

PERSONAL CARE

DOWSIL™ EL-TIPS Silicone Elastomer Blend

Delivering superior sensory experience with cosmetic products having a high naturality content



Today's consumers are demanding more from cosmetic products as they look for new ways to practice self-care at home with high-quality products that are not only safe for people, but safe for our planet. Eco-conscious consumers desire to go back to the basics and are focused on what matters and seek minimalist formulas.

Formulation advantages

- High-solids silicone elastomer to maximize weight efficiency in formulations
- Highly compatible with organic derivatives
- Compatible with a variety of cosmetic ingredients
- Suitable for formulations with high natural content

Consumer advantages

- Enables multiple textures and sensory experiences
- Luxurious feel for all skin types
- Rich smooth after-feel
- Blurs skin imperfections
- Moisturizing and suppleness perception of the skin
- Safe for people, safe for the planet

INCI Name: C13-15 Alkane (and) Dimethicone / Vinyl Dimethicone Crosspolymer

DOWSIL™ EL-TIPS Silicone Elastomer Blend

- **TOUCH** – Delivering multiple differentiated pleasant textures and touch while enabling brands to offer formulations with more than 90% natural ingredients and derived natural ingredients
- **INFUSION** – Creating an infusion experience wherever consumers go
- **PLANET** – Formulating products delivering active ingredients to the skin
- **SAVVY** – Enabling formulations with as few ingredients as possible with simplicity and minimalism in mind

Typical properties




Appearance	Colorless and clear gel
Active content %	~ 26.5%
Viscosity	250,000 – 550,000 cP
Carrier	C13-15 Alkane
Recommended use level	from 6% to 70%
Flash point	>95 °C
Refractive index at 25 °C	1.423
Shelf life	2 years
D4, D5, D6	<0.1%
ISO 16128-2	0.7 derived natural ingredient
Carrier origin	Sugar cane sourced (bio-fermentation)
China compliance	Listed in the catalog of cosmetic ingredients



Compatibility

Ratio DOWSIL™ EL-TIPS / ingredient	1:9	5:5	9:1
Water	NC	NC	NC
Ethanol	NC	NC	C
Hydrocarbons			
Isododecane	C	C	C
Isohexadecane	H	C	C
Mineral Oil	NC	NC	C
Silicones			
Cyclopentasiloxane	C	C	C
Dimethicone (5 cSt)	C	C	C
Dimethicone (100 cSt)	C	C	C
Caprylyl Methicone	C	C	C
Phenyltrimethicone	H	C	C
Oils			
Sunflower oil	NC	NC	H
Castor oil	NC	NC	NC
Esters			
C12-15 Alkyl benzoate	NC	NC	C
Caprylic / Capric Triglyceride	NC	NC	C
Renewable sourced carrier			
C13-15 Alkane	C	C	C
Undecane (and) Tridecane	C	C	C
Sunscreen			
Ethyl Hexyl Salicylate	NC	NC	C

C = Compatible and clear
 SC = Slightly compatible
 H = Compatible and hazy
 NC = Not compatible

 = gel
 = pourable viscous liquid
 = liquid



Skin care prototypes

Evening TOUCH CPF 4381 is a melting dry oil with 94% natural and derived natural ingredients for use in body care. It is suitable for medium to dry skin and absorbs quickly with a non-oily feel.

Phase	Trade name / Supplier	INCI name	Wt%
A	DOWSIL™ EL-TIPS Silicone Elastomer Blend / Dow	C13-15 Alkane (and) Dimethicone / Vinyl Dimethicone Crosspolymer	19
	Neossance Hemisqualane CN / Aprinova	C13-15 Alkane	10
	Cetiol LC / BASF	Coco-Caprylate / Caprate	14
	Lipovol ALM-N / Vantage	Prunus Amygdalus Dulcis (Sweet Almond) Oil	1.5
	Macadamia Nut Oil Organic TX 008172 / Vantage	Macadamia Ternifolia Seed Oil	1.5
	Cetiol Ultimate / BASF	Undecane (and) Tridecane	28
	Cetiol OE / BASF	Dicaprylyl Ether	8
B	Elevance Smooth CS-110 / Elevance / Univar Solutions	Hydrogenated Soy Polyglycerides (and) C15-23 Alkane	14
C	Antileukine 6 / Seppic	Caprylic / Capric Triglyceride (and) Laminaria Ochroleuca Extract	2
	Covi-ox T-70 C / BASF	Tocopherol	1
	Bulgarian Rose 272638 / Symrise AG	Perfume	0.8
	D&C Red 17 K7007 (0.05% in Cetiol Ultimate) / Sensient Cosmetic Technologies	CI 26100	0.2

Procedure:

1. Mix phase A ingredients together until homogeneous.
2. Add phase B ingredient, start heating to 50-55°C and mix until homogeneous.
3. Let cool down to < 40°C while mixing and add phase C ingredients.
4. Cool down to 32-35°C and pour into the packaging.



Morning TOUCH CPF 4382 is a gel-to-cream dry oil with 93% natural and derived natural ingredients for use in body care. Ideal for massage, it leaves behind a smooth after-feel and moisturized, supple skin perception.

Phase	Trade name / Supplier	INCI name	Wt%
A	DOWSIL™ EL-TIPS Silicone Elastomer Blend / Dow	C13-15 Alkane (and) Dimethicone / Vinyl Dimethicone Crosspolymer	25
	Neossance Hemisqualane CN / Aprinova	C13-15 Alkane	5
	Cetiol LC / BASF	Coco-Caprylate / Caprate	14
	Lipovol P / Vantage	Prunus Armeniaca (Apricot) Kernel Oil	1.2
	Cetiol Ultimate / BASF	Undecane (and) Tridecane	31
	Cetiol OE / BASF	Dicaprylyl Ether	8
	D&C Red 17 K7007 (0.05% in Cetiol Ultimate) / Sensient Cosmetic Technologies	CI 26100	0.15
	Unicert Yellow K7064-J (0.5% in Lipovol P) / Sensient Cosmetic Technologies	CI 47000	0.15
B	Sucragel AP V2 / Alchemy Ingredients Limited	Glycerin (and) Aqua (and) Sucrose Laurate	12
C	Antileukine 6 / Seppic	Caprylic / Capric Triglyceride (and) Laminaria Ochroleuca Extract	2
	Covi-ox T-70 C / BASF	Tocopherol	1
	Bright Touch E19E4513 / V. MANE Fils	Perfume	0.5

Procedure:

- Mix phase A ingredients in order listed until homogeneous.
- Slowly add phase A to phase B, mixing under high shear until homogeneous.
- Add phase C ingredients and mix until homogeneous.

INFUSION CPF 4383 is a perfumed gel with 82% natural and derived natural ingredients that is alcohol-free and can be formulated with multiple fragrances.

Phase	Trade name / Supplier	INCI name	Wt%
A	DOWSIL™ EL-TIPS Silicone Elastomer Blend / Dow	C13-15 Alkane (and) Dimethicone / Vinyl Dimethicone Crosspolymer	67.4
	White Bloom E19E8003 / V. MANE Fils	Perfume	16.0
	Colorona Karat Gold MP-2 / Merck KGaA	Mica (and) Titanium Dioxide (and) Iron oxides	0.1
	Neossance Hemisqualane CN / Aprinova	C13- 15 Alkane	16.5

Procedure:

- Mix phase A ingredients in order listed until homogeneous.

PLANET CPF 4384 is a water-in-oil cream with 95% natural and derived natural ingredients for use in face care that provides antioxidant protection and a refreshing sensation.

Phase	Trade name / Supplier	INCI name	Wt%
A	DOWSIL™ EL-TIPS Silicone Elastomer Blend / Dow	C13-15 Alkane (and) Dimethicone / Vinyl Dimethicone Crosspolymer	17.0
	Neossance Hemisqualane CN / Aprinova	C13- 15 Alkane	4.0
	Cetiol Ultimate / BASF	Undecane (and) Tridecane	7.5
	Cithrol PGTL / Croda	Tri(Polyglyceryl-3 / Lauryl) Hydrogenated Trilinoleate	3.0
B	AgeCap™ Smooth Cosmetic Ingredient / Dow	Methoxyhydroxyphenyl Isopropyl Nitrate	0.1
	Brontide BG / Genomatica	1,3-Butylene Glycol	3.0
	ZEMEA Propanediol / Dupont Tate & Lyle	Propanediol	2.0
	Glycerin Vegetal	Glycerin	5.0
C	Water	Water	53.5
	AA2G / DKSH	Ascorbic Acid 2-Glucoside	2.0
	Sodium Chloride	Sodium Chloride	1.0
D	Covi-ox T-70 C / BASF	Tocopherol	1.0
	Geogard ECT / Lonza	Benzyl Alcohol (and) Salicylic Acid (and) Glycerin (and) Sorbic Acid	0.6
	Sunny Petals E19E4508 / V. MANE Fils	Perfume	0.3

Procedure:

- Mix phase A ingredients in order listed until homogeneous.
- Mix ingredients AgeCap™ Smooth and Butylene Glycol and heat to 50-55°C until homogeneous. Then add the remaining phase B ingredients mixing well between each addition.
- Mix phase C ingredients together until homogeneous.
- Add phase C to phase B and mix.
- Slowly add blend BC to phase A, mixing until homogeneous.
- Add phase D ingredients in order listed and mix until homogeneous.
- Mix for an additional 5 minutes at 2000 RPM.

SAVVY CPF 4385 is an oil-in-water cream with 94% natural and derived natural ingredients that can be used on the face and body. Fragrance-free and easy-to-spread, SAVVY CPF 4385 is suitable for all skin types and is formulated with as few as possible ingredients to address eco-conscious consumers needs.

Phase	Trade name / Supplier	INCI name	Wt%
A	Water	Aqua	60.0
	Solagum TARA / Seppic	Caesalpinia Spinosa Gum	0.5
	ZEMEA Propanediol / Dupont Tate & Lyle	Propanediol	6.0
	Arlacel LC / Croda	Sorbitan Stearate (and) Sorbityl Laurate	6.0
B	DOWSIL™ EL-TIPS Silicone Elastomer Blend/Dow	C13-15 Alkane (and) Dimethicone / Vinyl Dimethicone Crosspolymer	19.0
	Cetiol LC / BASF	Coco-Caprylate / Caprate	2.5
	Cegesoft SH / BASF	Shorea Stenoptera Seed Butter	5.0
C	Kem Nat / Akema / Univar Solutions	Benzyl Alcohol (and) Glyceryl Caprylate (and) Glyceryl Undecylenate	1.0

Procedure:

1. Mix phase A ingredients in order listed and heat in a water bath to 70-75 °C, mixing until homogeneous.
2. Mix phase B ingredients in order listed and heat to 70°C. Cegesoft SH can be pre-melted for an easier incorporation.
3. Add phase B to phase A with gentle mixing.
4. Cool down to < 40°C with mixing.
5. Add phase C ingredient while mixing until homogeneous.
6. Do not forget to compensate water loss during heating.



About Dow

Dow Personal Care offers unique, innovative ingredients that enable customers around the world to create products with exceptional performance and exciting benefits that consumers can trust and believe in. Whether they seek the confidence of a healthy appearance or the comforts of a clean home, consumers can see and feel the difference in our products through their lustrous hair, radiant skin, shiny surfaces, and fabrics that look and smell fresh. We leverage our understanding of customer needs, deep market knowledge and technical expertise—combined with one of the broadest portfolios of technologies—to deliver home and personal care solutions with outstanding performance that are safe for people and the planet. We foster these innovations on global and local levels to meet the needs of diverse consumers through business centers, research and development (R&D), manufacturing plants and customer applications centers around the world. Please visit www.dow.com/personalcare for more information.

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