

PERSONAL CARE

Specialty elastomers from Dow



DOW

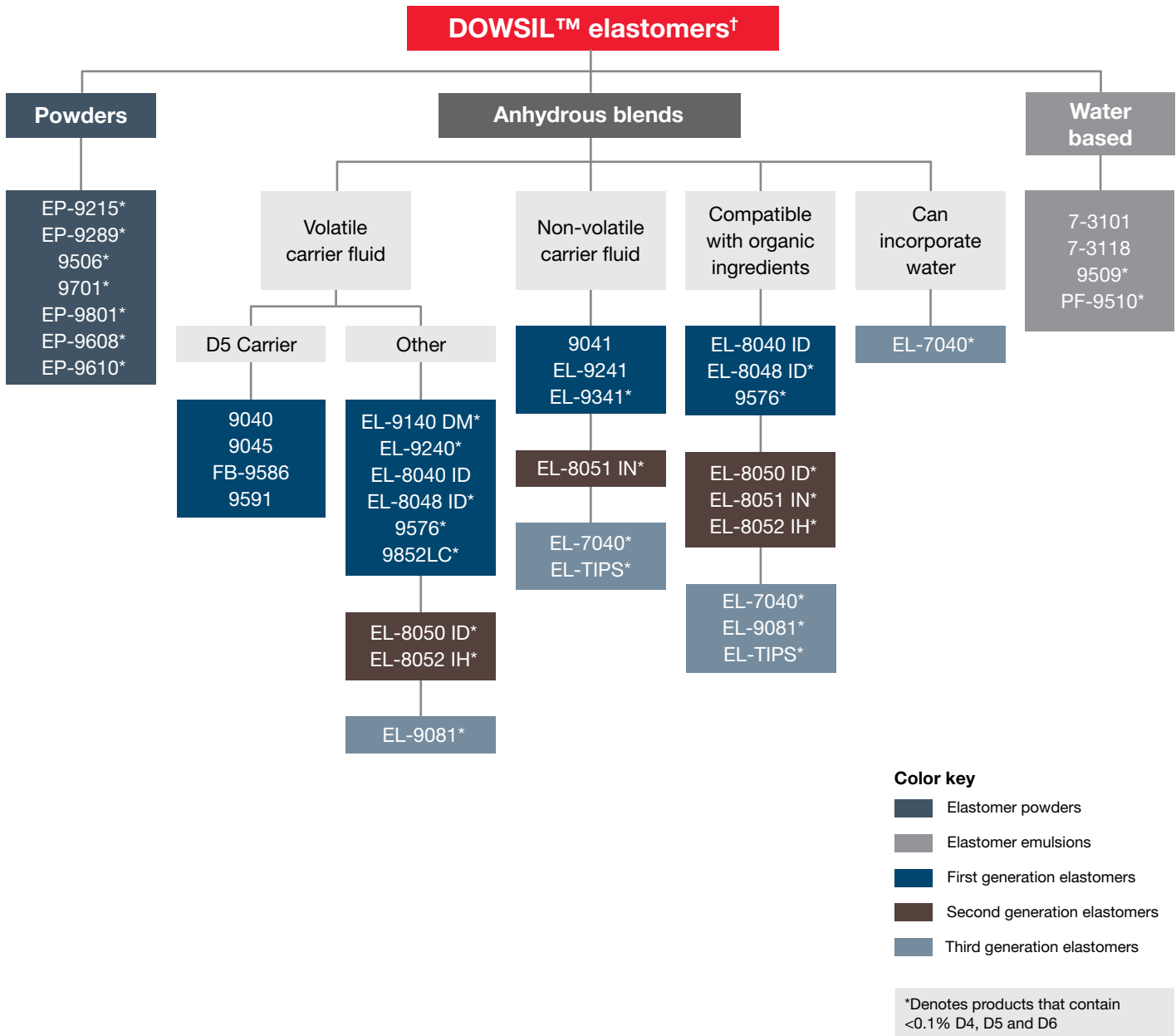


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DOWSIL™ Elastomer offerings at a glance

DOWSIL™ Elastomers are specialty silicone products that offer multifunctional benefits to formulations, including a unique silky powdery feel, sebum absorption, wrinkle masking, delivery of actives, film formation and active suspension.



† See tables on pages 3-9 for full product names.

Silicone elastomer suspensions: pre-emulsified water dispersible elastomers

Trade name	INCI name	Preservative system	Typical elastomer content	D4	D5	D6	Features
DOWSIL™ 7-3101 Elastomer Blend HIP Emulsion	Cyclopentasiloxane (and) Dimethicone Crosspolymer (and) Dimethicone (and) Laureth-23 (and) Laureth-4	Phenoxyethanol + Paraben	15%	<1%	NA	NA	<ul style="list-style-type: none"> • High internal phase (85% active) emulsion • Easily diluted with water • Enables cold blending and low shear processing • Simple aesthetic modification
DOWSIL™ 7-3118 EBAP HIP Emulsion	Cyclopentasiloxane (and) Dimethicone Crosspolymer (and) Dimethicone (and) Laureth-23 (and) Laureth-4	Phenoxyethanol + Potassium Sorbate	15%	<1%	NA	NA	<ul style="list-style-type: none"> • High internal phase (85% active) emulsion • Easily diluted with water • Enables cold blending and low shear processing • Simple aesthetic modification
DOWSIL™ 9509 Silicone Elastomer Suspension	Dimethicone/Vinyl Dimethicone Crosspolymer (and) C12-14 Pareth-12	Hydroxybenzoate + Chlorophenesin + Phenoxyethanol + Benzoic Acid	63%	<0.1%	<0.1%	<0.1%	<ul style="list-style-type: none"> • High oil and sebum absorption • Reduces greasiness • Mattifying
DOWSIL™ PF-9510 Silicone Elastomer Suspension	Dimethicone/Vinyl Dimethicone Crosspolymer (and) C12-14 Pareth-12	Chlorophenesin + Phenoxyethanol	63%	<0.1%	<0.1%	<0.1%	<ul style="list-style-type: none"> • Alternative preservative version of DOWSIL™ 9509 Silicone Elastomer Suspension

Blank fields indicate property does not adhere to description

NT: Not tested or identified

Silicone elastomer gels/blends: Oil dispersible elastomer gels

Trade name	INCI name	Carrier fluid	Carrier volatility	Viscosity	NVC	D4	D5	D6	Features
DOWSIL™ 9040 Elastomer Blend	Cyclopentasiloxane (and) Dimethicone Crosspolymer	Cyclopentasiloxane	Volatile	250,000 to 580,000 cP	12% to 12.75%	<1%	NA	NA	<ul style="list-style-type: none"> • Smooth powdery feel • Fragrance delivery • Oil phase thickener • Actives delivery
DOWSIL™ 9045 Silicone Elastomer Blend	Cyclopentasiloxane (and) Dimethicone Crosspolymer	Cyclopentasiloxane	Volatile	350,000 to 550,000 cP	12% to 12.75%	<1%	NA	NA	<ul style="list-style-type: none"> • Smooth powdery feel • Fragrance retention • Oil phase thickener
DOWSIL™ 9591 Cosmetic Powder Dispersion	Cyclopentasiloxane (and) Polysilicone-11	Cyclopentasiloxane	Volatile	30,000 to 70,000 cP	21% to 26%	<0.1%	NA	NA	<ul style="list-style-type: none"> • Dry smoothness and light, silky, non-greasy skin feel • Soft focus, masks imperfections • Sebum absorption
DOWSIL™ FB-9586 Silicone Elastomer Blend	Cyclopentasiloxane (and) Dimethicone/ Vinyl dimethicone Crosspolymer (and) Dimethicone	Cyclopentasiloxane, Dimethicone	Volatile	30,000 to 70,000 cPs	40% to 50%	<0.1%	NA	NA	<ul style="list-style-type: none"> • Smooth, slippery, powdery skin feel • Non-greasy, non-tacky • Matte appearance
DOWSIL™ EL-9140 DM Silicone Elastomer Blend	Dimethicone (and) Dimethicone Crosspolymer	Dimethicone (1.5 cSt)	Volatile	350,000 to 575,000 cP	13.25% to 14.75%	<0.1%	<0.1%	<0.1%	<ul style="list-style-type: none"> • Oil phase thickener • Smooth, powdery feel
DOWSIL™ 9576 Smooth Away Elastomer	Dimethicone (and) Dimethicone Crosspolymer (and) Dimethicone/ Vinyl Dimethicone Crosspolymer (and) Beeswax (and) Silica (and) Silica Silylate	Dimethicone (1.5 cSt)	Volatile	150,000 to 300,000 cP	15% to 17%	<0.1%	<0.1%	<0.1%	<ul style="list-style-type: none"> • Optimized for soft focus and imperfection masking • Smooth, powdery feel
DOWSIL™ EL-9240 Silicone Elastomer Blend	Dimethicone (and) Dimethicone Crosspolymer	Dimethicone (2 cSt)	Volatile	350,000 to 575,000 cP	13% to 14.5%	<0.1%	<0.1%	<0.1%	<ul style="list-style-type: none"> • Oil phase thickener • Smooth, powdery feel

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NT: Not tested or identified

Trade name	INCI name	Carrier fluid	Carrier volatility	Viscosity	NVC	D4	D5	D6	Features
DOWSIL™ 9852LC Silicone Gel	Dimethicone (and) Dimethicone/ Vinyl Dimethicone Crosspolymer	Dimethicone (2 cSt)	Volatile	18,000 to 50,000 cP	24% to 28%	<0.1%	<0.1%	<0.1%	<ul style="list-style-type: none"> • Dry smoothness and a light, silky, non-greasy skin feel • Soft focus, imperfections masking • Sebum absorption
DOWSIL™ EL-9081 Silicone Elastomer Blend	Dimethicone (and) Dimethicone/ Vinyl Dimethicone Crosspolymer	Dimethicone (2 cSt)	Volatile	250,000 to 500,000 cP	13.55% to 15.05%	<0.1%	<0.1%	<0.1%	<ul style="list-style-type: none"> • Smooth feel • Improved organic compatibility • Non-balling • Viscosity builder with lower use dosage • Low color and odor • High transparency
DOWSIL™ 9041 Silicone Elastomer Blend	Dimethicone (and) Dimethicone Crosspolymer	Dimethicone (5 cSt)	Non- volatile	300,000 to 500,000 cP	N/A	<1%	<1%	<1%	<ul style="list-style-type: none"> • Long lasting skin feel • Typical elastomer content 14% • Oil phase thickener
DOWSIL™ EL-9241 DM Silicone Elastomer Blend	Dimethicone (and) Dimethicone Crosspolymer	Dimethicone (5 cSt)	Non- volatile	300,000 to 500,000 cP	N/A	<0.1%	<0.1%	<1%	<ul style="list-style-type: none"> • Long lasting skin feel • Typical elastomer content 15-16% • Oil phase thickener
DOWSIL™ EL-9341 Silicone Elastomer Blend	Dimethicone (and) Dimethicone Crosspolymer	Dimethicone (6cSt)	Non- volatile	300,000 to 500,000 cP	N/A	<0.1%	<0.1%	<0.1%	<ul style="list-style-type: none"> • Long lasting skin feel • Typical elastomer content 15-16% • Oil phase thickener
DOWSIL™ EL-8040 ID Silicone Organic Blend	Isododecane (and) Dimethicone Crosspolymer	Isododecane	Volatile	300,000 to 550,000 cP	15.25% to 16.75%	<1%	<1%	<1%	<ul style="list-style-type: none"> • Elastomer feel with organic carrier • Low transfer in color cosmetic formulations
DOWSIL™ EL-8048 ID Silicone Organic Blend	Isododecane (and) Dimethicone Crosspolymer	Isododecane	Volatile	200,000 to 400,000 cP	13.50% to 16.50%	<0.1%	<0.1%	<0.1%	<ul style="list-style-type: none"> • Elastomer feel with organic carrier • Low transfer in color cosmetic formulations
DOWSIL™ EL-TIPS Silicone Elastomer Blend	C13-15 Alkane (and) Dimethicone/ Vinyl Dimethicone Crosspolymer	C13-15 Alkane	Non- volatile	250,000 to 550,000 cP	N/A	<0.1%	<0.1%	<0.1%	<ul style="list-style-type: none"> • Smooth feel in formulation • Typical elastomer content is ~26.5% • Blurring effect on skin • Carrier origin sugar cane source (Biofermentation) • 0.7 natural origin index per ISO-16128-2 • High transparency • Ideal for high natural content formulations

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NT: Not tested or identified

Silicone Organic Elastomer Blends (SOEB): Oil dispersible gels with enhanced organic compatibility

Trade name	INCI name	Carrier fluid	Carrier volatility	Viscosity	NVC	D4	D5	D6	Features
DOWSIL™ EL-8050 ID Silicone Organic Elastomer Blend (SOEB)	Isododecane (and) Dimethicone/ Bis-Isobutyl PPG-20 Crosspolymer	Isododecane	Volatile	350,000 to 575,000 cP	14.25% to 15.75%	<0.1%	<0.1%	<0.1%	<ul style="list-style-type: none"> Organic compatibility Ability to create clear anhydrous systems Oil phase thickener Sensory threshold: 5% for both O/W and W/O Transfer resistance Mattifying
DOWSIL™ EL-8051 IN Silicone Organic Elastomer Blend (SOEB)	Isodecyl Neopentanoate (and) Dimethicone/ Bis-Isobutyl PPG-20 Crosspolymer	Isodecyl Neopentanoate	Non- volatile	350,000 to 575,000 cP	N/A	<0.1%	<0.1%	<0.1%	<ul style="list-style-type: none"> Organic compatibility Typical elastomer content is 15% Ability to create clear anhydrous systems Oil phase thickener Sensory threshold: 8% for O/W and 5% for W/O Improves color intensity in color cosmetics Mattifying
DOWSIL™ EL-8052 IH Silicone Organic Elastomer Blend (SOEB)	Isohexadecane (and) Dimethicone/ Bis-Isobutyl PPG-20 Crosspolymer	Isohexadecane	Volatile	350,000 to 575,000 cP	16% to 17.5%	<0.1%	<0.1%	<0.1%	<ul style="list-style-type: none"> Organic compatibility Provides dry smoothness and light, silky, lubricated skin feel Ability to create clear anhydrous systems Oil phase thickener Mattifying

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NT: Not tested or identified



Hydrophilic elastomer blend

Trade name	INCI name	Carrier fluid	Carrier volatility	Viscosity	NVC	D4	D5	D6	Features
DOWSIL™ EL-7040 Hydro Elastomer Blend	Caprylyl Methicone (and) PEG-12 Dimethicone/ PPG-20 Crosspolymer	Caprylyl Methicone	Volatile	275,000 to 995,000 cP	17.5% to 19.5%	<0.1%	<0.1%	<0.1%	<ul style="list-style-type: none"> • Ability to incorporate water and polar materials • Compatibility with polar and organic materials • Smooth, spreadable, non-tacky skin feel • Ability to create fast breaking emulsions that deliver refreshing burst of water to skin • Cold processing • Can incorporate both hydrophilic and lipophilic actives • Ability to create clear systems • Oil phase thickener



Silicone elastomer powders: dry, oil-dispersible powders

Trade name	INCI name	Particle size	D4	D5	D6	Features
DOWSIL™ EP-9215 Cosmetic Powder	Dimethicone/Vinyl Dimethicone Crosspolymer	2-7 microns	<0.1%	<0.1%	<0.1%	<ul style="list-style-type: none"> Oil and sebum absorption Mattifying Powder hardness = 60
DOWSIL™ EP-9289 LL Cosmetic Powder	Dimethicone/Vinyl Dimethicone Crosspolymer (and) Lauroyl Lysine	NT	<0.1%	<0.1%	<0.1%	<ul style="list-style-type: none"> Powder compaction Sebum absorption
DOWSIL™ 9506 Powder	Dimethicone/Vinyl Dimethicone Crosspolymer	1-6 microns	<0.1%	<0.1%	<0.1%	<ul style="list-style-type: none"> Oil and sebum absorption Oil phase thickener Powder hardness = 30
DOWSIL™ EP-9608 Cosmetic Powder	Dimethicone Crosspolymer (and) Dimethicone	1-8 microns	<0.1%	<0.1%	<0.1%	<ul style="list-style-type: none"> Oil-loaded crosslinked polymer provides rich sensory with low agglomeration Hides pores and provides excellent affinity to skin Lower particle hardness (7) than other e-powders
DOWSIL™ EP-9610 Cosmetic Powder	Dimethicone Crosspolymer	1-8 microns	<0.1%	<0.1%	<0.1%	<ul style="list-style-type: none"> Provides unique smooth, bouncy and silky feel Oil/sebum absorption Optical mattifying effect Lower particle hardness (10) than other e-powders
DOWSIL™ 9701 Cosmetic Powder	Dimethicone/Vinyl Dimethicone Crosspolymer (and) Silica	1-10 microns	<0.1%	<0.1%	<0.1%	<ul style="list-style-type: none"> Wrinkle masking Sebum absorption Ease of use: free-flowing, low agglomeration Oil phase thickener
DOWSIL™ EP-9801 Hydro Cosmetic Powder	Dimethicone/Vinyl Dimethicone Crosspolymer (and) Butylene Glycol (and) Silica	3-10 microns	<0.1%	<0.1%	<0.1%	<ul style="list-style-type: none"> Water dispersible Wrinkle masking Sebum Absorption Ease of use: free-flowing, low agglomeration

Organic compatibility

Test material	DOWSIL™ 9045 Silicone Elastomer Blend	DOWSIL™ 9081 Silicone Elastomer Blend	DOWSIL™ EL-8050 ID Silicone Organic Elastomer Blend	DOWSIL™ EL-7040 Hydro Elastomer Blend
Ethylhexylmethoxy Cinnamate (OMC)	4	NC	9	10
Ethylhexyl Salicylate (OS)	9	8	9	10
C12-15 Alkyl Benzoate	NC	7	9	10
Caprylic/Capric Triglyceride	NC	3	9	10
Sunflower oil	2	NC	3	3
Squalane	2	7	2	NC
PPG-15 Stearyl Ether	2	NC	7	8
Mineral oil	3	7	3	NC
Ethanol	1	NC	9	10

Clarity – color coding

Clear
Slight haze
Hazy
Cloudy
Opaque
Not compatible

Viscosity – number scale

1 = Liquid ~245 Fluid

3 = Pourable ~10M cst PDMS

5 = Pourable ~60M cst PDMS

9 = Barely pourable when inverted ~300M cst PDMS

10 = Does not flow when inverted

NC = Not compatible; Viscosity not measured

Compatibility evaluated using 75/25 blend of elastomer/solvent



Paired comparison to DOWSIL™ 9045 Silicone Elastomer Blend

Dow product name		DOWSIL™ 9040 Silicone Elastomer Blend	DOWSIL™ 9041 Silicone Elastomer Blend	DOWSIL™ FB-9586 Silicone Elastomer Blend	DOWSIL™ EL-8040 ID Silicone Organic Blend	DOWSIL™ EL-9140 DM Silicone Elastomer Blend	DOWSIL™ EL-9240 Silicone Elastomer Blend	DOWSIL™ EL-8050 ID SOEB	DOWSIL™ EL-8051 IN SOEB	DOWSIL™ EL-8052 IH SOEB	DOWSIL™ EL-7040 Hydro Elastomer Blend
Before absorption	Wetness	-		+							
	Spreadability			+			+				
	Tackiness	-		-	-	NT	-				
	Absorbancy	+		+		NT					
After absorption	Gloss		+							+	
	Film residue	-	+			+			+		
	Greasiness	-	+	-					+		+
	Tackiness	-		-		-					
	Smoothness	+	-	+	-		+				
	Slipperiness	+		+	-	+	+				+
	Powdery feel	+	-		-	+					

NT: Not tested or identified

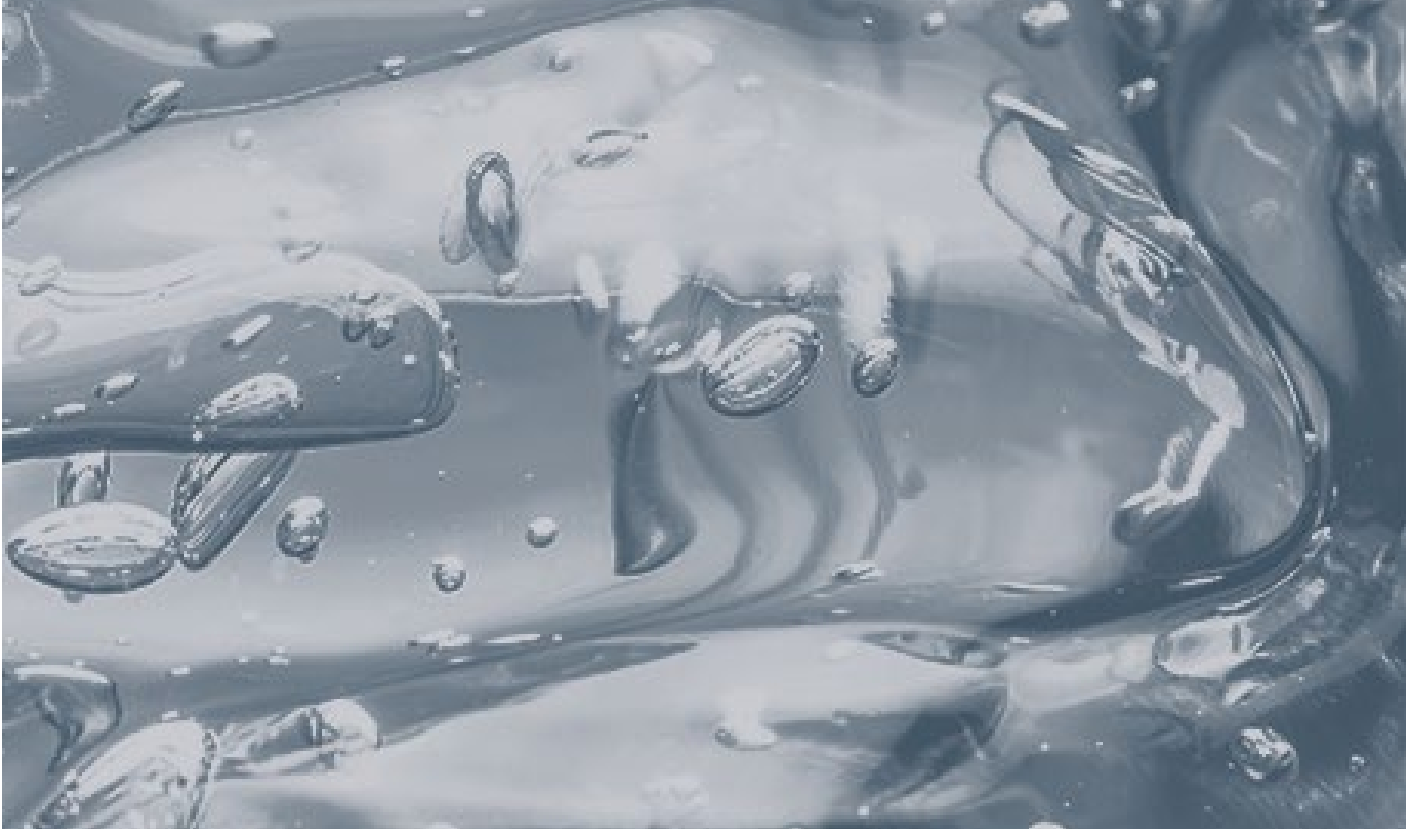
No difference	Different at 95%
Different at 99%	Different at 99.9%

Example: DOWSIL™ 9040 Silicone Elastomer Blend is less tacky (different at 99.9%) than DOWSIL™ 9045 Silicone Elastomer Blend.



Potential silicone diluents for elastomer gels

Product	INCI name	Viscosity (cP)	Specific gravity	Refractive index	Flash point (°C)
XIAMETER™ PMX-0245 Cyclopentasiloxane	Cyclopentasiloxane	4	0.95	1.397	77
XIAMETER™ PMX-200 Silicone Fluid 1.5 cSt	Dimethicone	1.5	0.85	1.387	57
XIAMETER™ PMX-200 Silicone Fluid 2 cSt	Dimethicone	2	0.87	1.39	87
XIAMETER™ PMX-200 Silicone Fluid 5 cSt	Dimethicone	5	0.91	1.397	124
DOWSIL™ FZ-3196 Fluid	Caprylyl Methicone	2-4	0.83	1.4105-1.4145	110



Need more information?

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