

Personal Care

Hair cleansing and conditioning selection guide

A tool for choosing the right solution

DOW

®



Innovative, versatile solutions for hair cleansing and conditioning

Consumers are searching for multifunctional hair care products that are designed with their individual needs in mind. And when it comes to cleansing and conditioning, they want soft, touchable hair with easy combing, color retention, enhanced shine, increased volume, frizz control – and more! To help you create new formulations that can keep up with the latest consumer demands, Dow offers a broad range of multifunctional solutions backed by application expertise.

This selection guide will help you identify which products from Dow can help you formulate solutions that set you apart. For more information about the products contained in this guide, please visit dow.com/personalcare.

Table of contents

Shampoos	3-6
Rinse-Off Conditioners.....	7-10
Leave-In Conditioners	11-14

Specialized, high-performing shampoos

No two people have exactly the same hair care needs. And no two markets are alike when it comes to what shampoo consumers seek. Our innovative formulations help you create targeted, customized shampoo products to meet diverse market trends and consumer demands – from moisturizing, shine and age-defying hair repair to tailored conditioning, improved softness and reduced flyaway benefits.

Rinse-off conditioners that shine

Less frizz and flyaway. More body and control. Reduced breakage and dryness. Increased definition and shine. Hair that looks and feels healthier, root to tip. That’s the goal. You can give consumers all of this and more with conditioning solutions that protect and repair while enhancing manageability and shine. For rinse-off conditioners, Dow offers a wide variety of multifunctional, highly customizable conditioning solutions that deliver better looking, better feeling, and better performing hair.

Leave-ins that won’t let you down

Consumers are looking for conditioning hair products that give them long-lasting benefits for soft, smooth, beautiful hair. Dow provides innovative ingredients with multifunctional benefits to help you formulate leave-in conditioners that keep hair manageable and beautiful, all day long.



Shampoos

Conditioning polymers – shampoos

Hair cleansing and conditioning selection guide

Product families	Products	Active content	Suggested use level	Conditioning level*	Clear shampoo	Sulfate alternative shampoo	Silicone alternative shampoo	Enhanced wet combing	Enhanced dry combing	Enhanced sensory feel	Enhanced shine		Enhanced volume	Frizz control	Silicone deposition aid	Approved for China	Low VMS (< 0.1% D4 and D5)	Low VMS (< 0.1% D6)	Additional benefits	INCI name
Silicone polyether fluids and emulsions	XIAMETER™ OFX-0193 Fluid	100%	1-3%	L	■			■	■						■	■	■			PEG-12 Dimethicone
	XIAMETER™ OFX-5330 Fluid	100%	1-3%	L	■			■	■	■	■									PEG/PPG-15/15 Acetate Dimethicone (and) PEG/PPG-15/15 Allyl Ether Acetate (and) PEG/PPG-15/15 Acetate
	DOWSIL™ CE-1874 Microemulsion	30%	1-5%	M	■	■		■	■	■	■		■		■	■			Color protection, long-lasting hydrophobicity	PEG-7 Dimethicone (and) Laureth-7 (and) Polysorbate 20
Dimethyl silicone emulsions	XIAMETER™ MEM-2664 Emulsion	50%	2-4%	M				■	■	■	■				■	■				Dimethicone (and) Laureth-4 (and) Laureth-23
	DOWSIL™ CE-1785 BA Emulsion	60%	2-4%	M				■	■	■					■				Reduced static	Dimethiconol (and) TEA-Dodecylbenzenesulfonate
	XIAMETER™ MEM-1788 Emulsion	51%	2-4%	M				■	■	■					■					Dimethiconol (and) TEA-Dodecylbenzenesulfonate
	XIAMETER™ MEM-7137 Emulsion	65%	2-4%	M				■	■	■					■	■				Dimethicone (and) Cocamidopropyl Betaine (and) C12-15 Pareth-3 (and) Guar Hydroxypropyltrimonium Chloride
	DOWSIL™ HMW 2220 Emulsion	60%	2-4%	M		■		■	■	■	■		■		■	■			Long-lasting hydrophobicity, Increased fragrance intensity and long lasting	Divinyldimethicone/Dimethicone Copolymer (and) C12-13 Pareth-23 (and) C12-13 Pareth-3
Amino silicone fluids	DOWSIL™ 2-8566 Amino Fluid	100%	1-3%	M	■			■	■	■	■				■				Reduced static, long-lasting hydrophobicity	Amodimethicone
	DOWSIL™ AP-8087 Fluid	100%	1-3%	H				■	■	■							■			Bis-Hydroxy/Methoxy Amodimethicone
	DOWSIL™ 8500 Conditioning Agent	100%	1-3%	M	■			■	■	■	■		■		■	■			Reduced static, long-lasting hydrophobicity	Bis (C13-15 Alkoxy) PG Amodimethicone
	DOWSIL™ AP-8568 Amino Fluid	100%	1-3%	M	■			■	■	■	■				■	■			Heat protection, decreases fly-away hair	Amodimethicone
	HydroxySHIELD™ Polymer	90%	1-2%	H		■		■	■	■							■	■	Color protection	Bis-Diisopropanolamino-PG-Propyl Disiloxane/ Bis-Vinyl Dimethicone Copolymer
Amino silicone emulsions	DOWSIL™ CE-8170 AF Microemulsion	20%	4-10%	M	■			■	■	■	■		■		■				Reduced static, color protection	Amodimethicone (and) C11-15 Pareth-7 (and) Laureth-9 (and) Glycerin (and) Trideceth-12
	DOWSIL™ CE-1689 Smoothing Emulsion	60%	1-3%	H				■	■	■					■				Color protection	Dimethicone (and) Amodimethicone (and) Laureth-23 (and) Polyquaternium-10 (and) Laureth-4
	DOWSIL™ 5-7113/CE-7114 Silicone Quat Microemulsion	22%	1-4%	H	■			■	■	■					■	■				Silicone Quaternium-16 (and) Undeceth-11 (and) Butyloctanol (and) Undeceth-5
	DOWSIL™ CE-8411 Smooth Plus Emulsion	56%	1-5%	H				■	■	■	■		■							Bis-Diisopropanolamino-PG-propyl Dimethicone/ Bis-Isobutyl PEG-14 Copolymer (and) Polysorbate 20 (and) Butyloctanol
	DOWSIL™ 969 Emulsion	30%	3-6%	H				■	■	■					■	■	■			Amodimethicone (and) Cetrimonium chloride (and) Trideceth-3 (and) Trideceth-15
	DOWSIL™ 979 Emulsion	50%	1-6%	H		■		■	■	■					■	■	■		Long-lasting hydrophobicity	Amodimethicone (and) C11-15 Alketh-12 (formerly C11-15 Pareth-12) (and) C11-15 Alketh-7 (formerly C11-15 Pareth-7)
Cationically substituted cellulose	UCARE™ Polymer JR-125	100%	0.2-0.4%	L	■	■		■	■	■			■	■	■		NA	NA	Synergy with FOAMYSENSE™ Water Soluble Resins provides enhanced conditioning and deposition	Polyquaternium-10
	UCARE™ Polymer LR-400	100%	0.2-0.4%	M	■	■		■	■	■			■	■	■		NA	NA	Synergy with FOAMYSENSE™ Water Soluble Resins provides enhanced conditioning and deposition	Polyquaternium-10
	UCARE™ Polymer JR-400	100%	0.2-0.5%	M	■	■	■	■	■	■			■	■	■		NA	NA	Synergy with FOAMYSENSE™ Water Soluble Resins provides enhanced conditioning and deposition	Polyquaternium-10
	UCARE™ Polymer LR-30M	100%	0.2-0.4%	MH	■	■	■	■	■	■			■	■	■		NA	NA	Synergy with FOAMYSENSE™ Water Soluble Resins provides enhanced conditioning and deposition	Polyquaternium-10
	UCARE™ Polymer JR-30M	100%	0.2-0.5%	MH	■	■	■	■	■	■			■	■	■		NA	NA	Synergy with FOAMYSENSE™ Water Soluble Resins provides enhanced conditioning and deposition	Polyquaternium-10
	UCARE™ Extreme Polymer	100%	0.1-0.3%	H	■	■	■	■	■	■			■	■	■		NA	NA		Polyquaternium-10
	SoftCAT™ SL-5 Polymer	100%	0.2-0.4%	H	■	■	■	■	■	■			■	■	■		NA	NA	Synergy with FOAMYSENSE™ Water Soluble Resins provides enhanced conditioning and deposition, color protection	Polyquaternium-67
	SoftCAT™ SL-30 Polymer	100%	0.2-0.4%	H	■	■	■	■	■	■			■	■	■		NA	NA	Synergy with FOAMYSENSE™ Water Soluble Resins provides enhanced conditioning and deposition, color protection	Polyquaternium-67
	SoftCAT™ SL-100 Polymer	100%	0.2-0.4%	H	■	■	■	■	■	■			■	■	■		NA	NA	Synergy with FOAMYSENSE™ Water Soluble Resins provides enhanced conditioning and deposition, color protection	Polyquaternium-67
	SoftCAT™ SX-400X Polymer	100%	0.2-0.4%	H	■	■	■	■	■	■			■	■	■		NA	NA	Synergy with FOAMYSENSE™ provides enhanced conditioning and deposition, volume control and fragrance deposition; can be used for anti-dandruff	Polyquaternium-67
SoftCAT™ SX-1300X Polymer	100%	0.2-0.4%	H	■	■	■	■	■	■			■	■	■		NA	NA	Synergy with FOAMYSENSE™ Water Soluble Resins provides enhanced conditioning and deposition, volume control and fragrance deposition; can be used for anti-dandruff	Polyquaternium-67	

These are typical properties, not to be construed as specifications.
 Note: Blanks indicate benefits not yet tested or found
 *Compared within silicone and organic ranges; L=Low, M=Medium, MH=Medium High, H=High

Additional solutions – shampoo formulations

Function	Product family	Products	Active content	Recommended use level in a formulation	INCI name	Key features and benefits	Approved for China	Sustainability claim
Appearance	Opacifiers	OPULYN™ 301 Opacifier	40%	0.1-1.0%	Styrene/Acrylates Copolymer	Used to create a rich, creamy or lotionized look and feel. Excellent formulation compatibility and stability	■	
Cleansing	Surfactants	EcoSense™ 1200 Surfactant	50%	1-15%	Lauryl Glucoside	Family of naturally derived, readily biodegradable surfactants. Excellent flash foaming, good rinseability and mildness to the skin. Preservative-free and compatible with a broad range of personal care ingredients	■	Cosmos, Ecocert
		EcoSense™ 919 Surfactant	50%	1-15%	Coco-Glucoside		■	Cosmos, Rspo, Ecocert
		EcoSense™ 3000 Surfactant	51%	1-15%	Decyl Glucoside		■	Cosmos, Rspo, Ecocert, Natural Origin Content (ISO 16128),
Sensory enhancement-foam enhancers	Cellulosic Thickeners	CELLOSIZETM Texture 40-0202 Hydroxypropyl Methylcellulose	100%	0.2-1.5%	Hydroxypropyl Methylcellulose	Enhances foam generation, providing rich, creamy cleansing formulas. Enables low surfactant formulas with improved mildness and fragrance deposition	■	
	Nonionic Polymers of EO	FOAMYSENSETM Water Soluble Resins Series	100%	0.05-0.2%	PEG-X*	Improves the foam and feel in shampoo	■	
Sensory enhancement-lubricity	Nonionic Polymers of EO	FOAMYSENSETM Water Soluble Resins Series	100%	0.05-0.2%	PEG-X*	Enhances wet combing of shampoos. Synergistic with SoftCAT™ and UCARE™ polymers for conditioning and deposition. Enhances sensory feel of product, including providing slip/lubricious in-wash feel and smooth after-feel	■	
Rheology modifiers, thickeners and texturizers	ACULYN™ Rheology Modifiers: Hydrophobically Modified ASE (HASE)	ACULYN™ Excel Rheology Modifier	31%	4-8%	Acrylates Copolymer	Excellent suspension and clarity at low pH (<6.5)	■	
		ACULYN™ 22 Rheology Modifier	30%	2-8%	Acrylates/Steareth-20 Methacrylate Copolymer	First choice for shampoo. Broad surfactant compatibility. Slightly elongational texture. A very efficient thickener for difficult-to-thicken surfactant systems	■	
		ACULYN™ 28 Rheology Modifier	20%	4-8%	Acrylates/Beheneth-25 Methacrylate Copolymer	Most efficient thickener for viscosity build. Jelly-like texture	■	
		ACULYN™ 88 Rheology Modifier	29%	2-7%	Acrylates/Steareth-20 Methacrylate Crosspolymer	Crosslinked. Honey-like flow. Some suspension	■	
		ACULYN™ U Rheology Modifier	30%	3-8%	Acrylates/Beheneth-25 Methacrylate Copolymer	Ideal for sulfate-free formulations, can thicken clear gel systems, salt tolerant, thickens hard-to-thicken AA surfactant-based systems, viscosity synergy with UCARE™ cationic polymer	■	
	ACULYN™ Rheology Modifiers: Alkali Swellable Emulsion (ASE)	ACULYN™ 38 Rheology Modifier	29%	2-7%	Acrylates/Vinyl Neodecanoate Crosspolymer	Good for suspension at neutral pH	■	
		ACULYN™ 33A Rheology Modifier	28%	2-7%	Acrylates copolymer	Good suspending properties for non-clear systems	■	
	Cellulosic Thickeners	CELLOSIZETM PCG-10 Hydroxyethyl Cellulose	100%	0.2-1%	Hydroxyethyl Cellulose	Nonionic water-soluble thickeners that provide efficient thickening and viscosity modification with broad compatibility. Dispersible in cold water	■	
		CELLOSIZETM QP Series Hydroxyethyl Cellulose	100%	0.2-1.5%	Hydroxyethyl Cellulose		■	Non-GMO Wood PEFC certified**
		CELLOSIZETM Texture 40 Series Hydroxypropyl	100%	0.2-1.5%	Hydroxypropyl Methylcellulose		■	Non-GMO
Viscosity control	Copolymers of EO and PO	UCON™ 50-HB-660 Lubricant	100%	0.025-0.125%	PPG-12-Buteth-16	In surfactant-thickened shampoo systems, UCON™ fluids can be used for fine control of viscosity to meet performance and aesthetic benefits	■	
		UCON™ 50-HB-3520 Lubricant	100%	0.025-0.125%	PPG-28-Buteth-35		■	

These are typical properties, not to be construed as specifications.

*INCI name will depend on FOAMYSENSETM Water Soluble Resin product chosen

**Except for CELLOSIZETM HEC QP-100MH



*Rinse-off
conditioners*

Conditioning polymers – rinse-off conditioners

Hair cleansing and conditioning selection guide

Product families	Products	Active content	Recommended use level in a formulation	Conditioning level*	Clear systems	Cleansing conditioner	Enhanced wet combing	Enhanced dry combing	Enhanced dry sensory feel	Enhanced shine	Reduced static		Enhanced volume	Color protection	Long-lasting hydrophobicity	Reduced breakage and split ends	Approved for China	Low VMS (< 0.1% D4 and D5)	Additional benefits	INCI name
Silicone polyether fluids	XIAMETER™ OFX-0193 Fluid	100%	1-3%	L	■		■	■	■								■	■		PEG-12 Dimethicone
	XIAMETER™ OFX-5330 Fluid	100%	1-4%	L	■		■	■	■					■						PEG/PPG-15/15 Acetate Dimethicone (and) PEG/PPG-15/15 Allyl Ether Acetate (and) PEG/PPG-15/15 Acetate
Silicone blends	XIAMETER™ PMX-1501 Fluid	15%	2-6%	M			■	■	■	■	■						■		Decreases fly-away hair	Cyclopentasiloxane (and) Dimethiconol
	XIAMETER™ PMX-1503 Fluid	12%	2-4%	M			■	■	■	■	■						■			Dimethicone (and) Dimethiconol
	DOWSIL™ PMX-1504 Fluid	27%	1-3%	M			■	■	■	■	■					■	■	■		C11-13 Isoparaffin (and) Isohexadecane (and) Dimethiconol
	DOWSIL™ PMX-1505 Fluid	15%	2-6%	M			■	■	■	■	■					■	■	■		Isododecane (and) Dimethiconol
	DOWSIL™ PMX-1507 Fluid	18.5%	1.6-4.9%	M			■	■	■	■	■					■	■	■		Dimethicone (and) Dimethiconol
	DOWSIL™ PMX-1508 Fluid	20.5%	1.5-4.4%	M			■	■	■	■	■					■	■	■		C13-15 Alkane (and) Dimethiconol
Dimethyl emulsions	XIAMETER™ MEM-2664 Emulsion	50%	2-4%	M			■	■	■		■						■	■		Dimethicone (and) Laureth-4 (and) Laureth-23
	DOWSIL™ HMW 2220 Non-Ionic Emulsion	60%	1-3%	M			■	■	■					■			■	■		Divinyldimethicone/Dimethicone Copolymer (and) C12-13 Pareth-23 (and) C12-13 Pareth-3
Amino silicone fluids	DOWSIL™ 2-8566 Amino Fluid	100%	1-4%	M			■	■	■		■			■			■			Amodimethicone
	DOWSIL™ AP-8087 Fluid	100%	1-4%	M			■	■	■					■	■			■		Bis-Hydroxy/Methoxy Amodimethicone
	DOWSIL™ 8500 Conditioning Agent	100%	1-2%	H	■		■	■	■	■	■		■	■	■	■	■	■		Bis (C13-15 Alkoxy) PG Amodimethicone
	DOWSIL™ AP-8568 Amino Fluid	100%	1-4%	M			■	■	■		■			■			■	■	Heat protection, decreases fly-away hair	Amodimethicone
	HydroxySHIELD™ Polymer	90%	1-2%	H	■	■	■	■	■					■	■	■		■	Heat protection, fast drying	Bis-Diisopropanolamino-PG-Propyl Disiloxane/Bis-Vinyl Dimethicone Copolymer
Amino silicone emulsions	DOWSIL™ CE-8170 AF Microemulsion	20%	2-10%	M	■		■	■	■	■	■		■	■			■			Amodimethicone (and) C11-15 Pareth-7 (and) Laureth-9 (and) Glycerin (and) Trideceth-12
	DOWSIL™ CE-1689 Smoothing Emulsion	60%	1-3%	M			■	■	■								■			Dimethicone (and) Amodimethicone (and) Laureth-23 (and) Polyquaternium-10 (and) Laureth-4
	DOWSIL™ CE-7081/CE-7080 Smart Style	24%	2-8%	H		■	■	■	■					■	■	■				Silicone Quaternium-16/Glycidoxy Dimethicone Crosspolymer (and) Undeceth-11 (and) Undeceth-5
	XIAMETER™ MEM-0949 Emulsion	36%	2-6%	H			■	■	■	■	■		■	■			■		Fast drying	Amodimethicone (and) Cetrimonium Chloride (and) Trideceth-12
	DOWSIL™ 969 Emulsion	30%	3-7%	H		■	■	■	■	■					■	■	■	■	Heat protection, fast drying, ease of styling	Amodimethicone (and) Cetrimonium chloride (and) Trideceth-3 (and) Trideceth-15
	DOWSIL™ 979 Emulsion	50%	1-6%	H		■	■	■	■	■				■	■	■	■	■	Fast drying, effective at low use level, effective deposition, homogeneous hair coverage	Amodimethicone (and) C11-15 Alketh-12 (formerly C11-15 Pareth-12) (and) C11-15 Alketh-7 (formerly C11-15 Pareth-7)
	DOWSIL™ 5-7113/CE-7114 Silicone Quat Microemulsion	22%	2-6%	H	■	■	■	■	■	■		■		■	■	■	■	■	Fast drying	Silicone Quaternium-16 (and) Undeceth-11 (and) Butyloctanol (and) Undeceth-5
	DOWSIL™ CE-8411 Smooth Plus Emulsion	56%	1-5%	H		■	■	■	■	■	■		■	■	■	■	■		Fast drying, heat protection	Bis-Diisopropanolamino-PG-propyl Dimethicone/Bis-Isobutyl PEG-14 Copolymer (and) Polysorbate 20 (and) Butyloctanol
Cationically substituted cellulose	UCARE™ Extreme Polymer	100%	0.1-0.3%	H	■	■	■	■	■						■	■	■	NA	Improved styling and manageability, enhanced oil deposition, heat protection, frizz control, fiber alignment	Polyquaternium-10
	SoftCAT™ SX-1300X Polymer	100%	0.2-0.4%	H	■	■	■	■	■	■							■	NA	Volume and frizz control, synergy with FOAMYSENSE™ Water Soluble Resins for enhanced conditioning benefits	Polyquaternium-67

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*Compared within silicone and organic ranges; L=Low, M=Medium, MH=Medium High, H=High

Note: Blanks indicate benefits not yet tested or found

Additional solutions – rinse-off conditioners

Function	Product family	Products	Active content	Recommended use level in a formulation	INCI name	Key features and benefits	Approved for China
Appearance	Opacifiers	OPULYN™ 303B Opacifier	40%	0.1-1.0%	Styrene/Acrylamide Copolymer	Used to create a rich, creamy, or lotionized look and feel. Excellent formulation compatibility and stability	■
	Sensory enhancement-lubricity	Nonionic Polymers of EO	FOAMYSENSE™ Water Soluble Resin Series	100%	0.05-0.2%	PEG-X*	Enhances wet combing and provides soft feel and smooth application; also adds aqueous thickening. Synergistic with SoftCAT™ and UCARE™ polymers for conditioning and deposition.
		Copolymers of EO and PO	Fluid AP	~100%	0.2-10%	PPG-14 Butyl Ether	Enhances shine and sensory feel. High spreadability emollient that enhances conditioning and volume control, with smooth after-feel
Rheology modifiers, thickeners and texturizers	ACULYN™ Rheology Modifiers: Hydrophobically Modified Ethoxylated Urethanes (HEUR)	ACULYN™ 44 Rheology Modifier	35%	1-5%	PEG-150/Decyl Alcohol/SMDI Copolymer	Nonionic. Good for difficult-to-thicken systems. Excellent salt, pH and cationic tolerance. Hydrophobic materials needed with which to associate. Creamy texture	■
		ACULYN™ 46N Rheology Modifier	19%	1-5%	PEG-150/Stearyl Alcohol/SMDI Copolymer	More efficient than ACULYN™ 44. Nonionic. Good for difficult-to-thicken systems. Excellent salt, pH and cationic tolerance. Hydrophobic materials needed with which to associate. Creamy texture	■
	ACULYN™ Rheology Modifiers: Hydrophobically Modified ASE (HASE)	ACULYN™ U Rheology Modifier	30%	3-8%	Acrylates/Beheneth-25 Methacrylate Copolymer	Can provide high thickening and shear-thinning performance	■
	Cellulosic Thickeners	CELLOSIZETM QP Series	100%	0.2-1%	Hydroxyethyl Cellulose	Nonionic water-soluble thickeners that provide efficient thickening and viscosity modification with broad compatibility. Dispersible in cold water. Non-GMO Wood PEFC certified**	■
		CELLOSIZETM PCG-10 Hydroxyethyl Cellulose	100%	0.2-1%	Hydroxyethyl Cellulose	Nonionic water-soluble thickeners that provide efficient thickening and viscosity modification with broad compatibility. Dispersible in cold water.	■
		CELLOSIZETM Texture 40 Series Hydroxypropyl Methylcellulose	100%	0.2-0.5%	Hydroxypropyl Methylcellulose	Nonionic water-soluble cellulosic polymer that provides thickening	■

These are typical properties, not to be construed as specifications.

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**Except for CELLOSIZETM HEC QP-100MH



*Leave-in
conditioners*

Conditioning polymers – leave-in conditioners

Hair cleansing and conditioning selection guide

Product families	Products	Active content	Recommended use level in a formulation	Conditioning level*	Clear products	Anhydrous/water-based formulation**	Enhanced wet combing	Enhanced dry combing	Enhanced dry sensory feel	Enhanced shine	Reduced static		Color protection	Heat protection	Fast drying	Frizz control	Long-lasting hydrophobicity	Ease and long-lasting styling	Approved for China	Low VMS (<0.1% in D4 and D5)	Low VMS (<0.1% in D6)	Additional benefits	INCI name		
Silicone polyether fluids and emulsions	XIAMETER™ OFX-0193 Fluid	100%	1-5%	L	■	W	■	■	■										■	■	■	Resin plasticizer	PEG-12 Dimethicone		
	XIAMETER™ OFX-5330 Fluid	100%	1-5%	L	■	W	■	■	■	■									■				PEG/PPG-15/15 Acetate Dimethicone (and) PEG/PPG-15/15 Allyl Ether Acetate (and) PEG/PPG-15/15 Acetate		
	DOWSIL™ CE-1874 Microemulsion	30%	1-5%	L	■	W	■	■	■										■	■			PEG-7 Dimethicone (and) Laureth-7 (and) Polysorbate 20		
Silicone blends	XIAMETER™ PMX-1501 Fluid	15%	2-20%	M	■ (Anhydrous)	AW	■	■	■	■				■		■			■			Reduced frizz	Cyclopentasiloxane (and) Dimethiconol		
	XIAMETER™ PMX-1503 Fluid	12%	2-10%	M	■ (Anhydrous)	AW	■	■	■	■				■		■			■				Dimethicone (and) Dimethiconol		
	DOWSIL™ CB 3046 Fluid	100%	5-15%	M	■ (Anhydrous)	AW			■	■				■		■			■	■			Volume control, fiber alignment, curl definition	Dimethicone (and) Phenyl Trimethicone (and) Trimethylsiloxysilicate (and) Dimethiconol	
	DOWSIL™ 3901 Liquid Satin Blend	6.25%	3-20%	M	■ (Anhydrous)	AW			■	■	■			■		■			■	■	■			Curl retention and definition, fiber alignment	Dimethicone (and) Dimethicone/Vinyl Dimethicone Crosspolymer
	DOWSIL™ 3903 Liquid Satin Blend	7-8%	0.5-10%	M	■ (Anhydrous)	AW			■	■	■			■		■			■	■	■			Curl retention and definition, reduce frizz and fly-away hairs	Isododecane (and) Dimethicone/Vinyl Dimethicone Crosspolymer
	DOWSIL™ PMX-1504 Fluid	27%	14-40%	M	■ (Anhydrous)	AW			■	■	■			■		■			■	■	■			Imparts split end repair, reduced friction	C11-13 Isoparaffin (and) Isohexadecane (and) Dimethiconol
	DOWSIL™ PMX-1505 Fluid	15%	20-60%	M	■ (Anhydrous)	AW			■	■	■			■		■			■	■	■			Imparts split end repair, reduced friction, volume control	Isododecane (and) Dimethiconol
	DOWSIL™ PMX-1507 Fluid	18.5%	4-55%	M	■ (Anhydrous)	AW			■	■	■			■		■			■	■	■			Imparts split end repair, reduced friction, volume control	Dimethicone (and) Dimethiconol
	DOWSIL™ PMX-1508 Fluid	20.5%	5-44%	M	■ (Anhydrous)	AW			■	■	■			■		■			■	■	■			Imparts split end repair, reduced friction, volume control	C13-15 Alkane (and) Dimethiconol
	Dimethyl emulsions	DOWSIL™ HMW 2220 Non-Ionic Emulsion	60%	1-5%	M		W	■	■	■	■			■	■	■				■	■			Reduced breakage	Divinyldimethicone/Dimethicone Copolymer (and) C12-13 Pareth-23 (and) C12-13 Pareth-3
XIAMETER™ MEM-2664 Emulsion		50%	1-5%	M		W	■	■	■	■				■					■	■			Dimethicone (and) Laureth-4 (and) Laureth-23		
Amino silicone fluids	DOWSIL™ 2-8566 Amino Fluid	100%	1-5%	M		AW	■	■	■	■	■		■	■					■	■			Amodimethicone		
	DOWSIL™ AP-8087 Fluid	100%	1-5%	M		AW	■	■	■	■	■		■	■					■	■	■		Bis-Hydroxy/Methoxy Amodimethicone		
	DOWSIL™ 8500 Conditioning Agent	100%	2-6%	H	■	AW			■	■	■		■	■					■	■			Volume control	Bis (C13-15 Alkoxy) PG Amodimethicone	
	DOWSIL™ AP-8568 Amino Fluid	100%	1-5%	M		AW	■	■	■	■	■		■	■					■	■			Reduced fly-away hairs	Amodimethicone	
	HydroxySHIELD™ Polymer	90%	1-2%	H	■	AW	■	■	■	■	■		■	■	■				■	■	■		Reduced breakage, fiber alignment	Bis-Diisopropanolamino-PG-Propyl Disiloxane/Bis-Vinyl Dimethicone Copolymer	
Amino silicone emulsions	DOWSIL™ CE-8170 AF Microemulsion	20%	2-10%	M	■	W	■	■	■	■	■		■						■	■			Amodimethicone (and) C11-15 Pareth-7 (and) Laureth-9 (and) Glycerin (and) Trideceth-12		
	DOWSIL™ CE-7081 /CE-7080 Smart Style	24%	2-8%	H		W	■	■	■	■			■			■			■	■			Curl retention and definition, fiber alignment, reduced breakage	Silicone Quaternium-16/Glycidoxy Dimethicone Crosspolymer (and) Undeceth-11 (and) Undeceth-5	
	XIAMETER™ MEM-0949 Emulsion	36%	2-8%	H		W	■	■	■	■	■		■	■	■				■	■			Amodimethicone (and) Cetrimonium Chloride (and) Trideceth-12		
	DOWSIL™ 969 Emulsion	30%	3-10%	H		W	■	■	■	■			■	■	■				■	■	■		Reduced breakage, fiber alignment	Amodimethicone (and) Cetrimonium Chloride (and) Trideceth-3 (and) Trideceth-15	
	DOWSIL™ 979 Emulsion	50%	1-6%	H		W	■	■	■	■			■	■	■				■	■	■		Reduced breakage, fiber alignment	Amodimethicone (and) C11-15 Alketh-12 (formerly C11-15 Pareth-12) (and) C11-15 Alketh-7 (formerly C11-15 Pareth-7)	
	DOWSIL™ 5-7113/CE-7114 Silicone Quat Microemulsion	22%	2-8%	H	■	W			■	■	■			■	■	■			■	■	■			Silicone Quaternium-16 (and) Undeceth-11 (and) Butyloctanol (and) Undeceth-5	
	DOWSIL™ CE-8411 Smooth Plus Emulsion	56%	1-5%	H		W								■	■	■				■	■			Bis-Diisopropanolamino-PG-Propyl Dimethicone/Bis-Isobutyl PEG-14 Copolymer (and) Polysorbate 20 (and) Butyloctanol	
Other specialty silicones	DOWSIL™ 556 Cosmetic Grade Fluid	100%	2-5%	L		AW		■	■	■									■	■			Phenyl Trimethicone		
	DOWSIL™ 2-2078 Fluid	100%	1-3%	L		AW		■	■	■	■		■	■	■					■			Volume control, fiber alignment	Aminopropyl Phenyl Trimethicone	
	DOWSIL™ 9509 / PF-9510 Silicone Elastomer Suspension	65-68%	1-15%	L		AW			■	■			■							■			Sebum / oil absorption, powdery feel, scalp moisturization, texture builder	Dimethicone/Vinyl Dimethicone Crosspolymer (and) C12-14 Pareth-12	
	DOWSIL™ EP-9801 Hydro Cosmetic Powder	100%	1-5%	L		AW			■	■									■	■	■		Sebum absorption, powdery feel	Dimethicone/Vinyl Dimethicone Crosspolymer (and) Silica (and) Butylene Glycol	
	DOWSIL™ VM-2270 Aerogel Fine Particles	100%	0.5-5%	L		AW			■	■										■	■	NA	Sebum / oil absorption, viscosity enhancement of oil phase	Silica Silylate	
	DOWSIL™ OHX-0080 Fluid	100%	1-30%	L	■ (Anhydrous)	AW			■	■				■					■	■	■			Helps build viscosity in hair oils, non-greasy effect	Dimethiconol
Cationically substituted celluloses	UCARE™ Polymer LR-30M	100%	0.2-0.4%	MH	■			■	■	■									■	NA	NA	Enhanced fragrance deposition	Polyquaternium-10		
	UCARE™ Extreme Polymer	100%	0.1-0.3%	H	■			■	■	■									■	NA	NA	Curl retention	Polyquaternium-10		
	SoftCAT™ SX-1300X Polymer	100%	0.2-0.4%	H	■			■	■	■									■	NA	NA	Synergy with FOAMYSENSE™ Water Soluble Resins for enhanced conditioning	Polyquaternium-67		

These are typical properties, not to be construed as specifications.

*Compared within silicone and organic ranges; L=Low, M=Medium, MH=Medium High, H=High

** W= Water-Based, A=Anhydrous, AW=Both

Note: Blanks indicate benefits not yet tested or found

Additional solutions – leave-in conditioners

Function	Product family	Products	Active content	Recommended use level in a formulation	INCI name	Key features and benefits	Approved for China	Low VMS (<0.1% in D4 and D5)	Low VMS (<0.1% in D6)
Appearance	Opacifiers	OPULYN™ 303B Opacifier	40%	0.1-1.0%	Styrene/ Acrylamide Copolymer	Used to create a rich, creamy, or lotionized look and feel. Excellent formulation compatibility and stability	■	NA	NA
Sensory enhancement- lubricity and shine	Nonionic Polymers of EO	FOAMYSENSE™ Water Soluble Resin Series	100%	0.05-0.2%	PEG-X*	Provides enhanced wet combing, shine and conditioning feel. Synergetic boost of conditioning with SoftCAT™ and UCARE™ polymers	■	NA	NA
	Copolymers of EO and PO	Fluid AP	100%	0.2-10%	PPG-14 Butyl Ether	Enhances shine and sensory feel. High spreadability emollient that enhances conditioning and volume control, with smooth after-feel	■	NA	NA
Rheology, modifiers, thickeners and texturizers	ACULYN™ Rheology Modifiers: Hydrophobically Modified Ethoxylated Urethanes (HEUR)	ACULYN™ 44 Rheology Modifier	35%	1-5%	PEG-150/Decyl Alcohol/SMDI Copolymer	Nonionic. Good for difficult-to-thicken systems. Excellent salt, pH and cationic tolerance. Hydrophobic materials needed with which to associate. Creamy texture	■	NA	NA
	ACULYN™ Rheology Modifiers: Hydrophobically Modified ASE (HASE)	ACULYN™ U Rheology Modifier	30%	0.6-3%	Acrylates/ Beheneth-25 Methacrylate Copolymer	High shear-thinning, low pH tolerance, compatible with cationic ingredients, enhances hair stiffness	■	NA	NA
	Cellulosic Thickeners	CELLOSIZETM QP Series	100%	0.2-1%	Hydroxyethyl Cellulose	Nonionic water-soluble thickeners that provide efficient thickening and viscosity modification with broad compatibility. Dispersible in cold water Non-GMO Wood PEFC certified**	■	NA	NA
		CELLOSIZETM PCG-10 Hydroxyethyl Cellulose	100%	0.2-1%	Hydroxyethyl Cellulose	Nonionic water-soluble thickeners that provide efficient thickening and viscosity modification with broad compatibility. Dispersible in cold water	■	NA	NA
		CELLOSIZETM Texture 40 series Hydroxypropyl Methylcellulose	100%	0.2-0.5%	Hydroxypropyl Methylcellulose	Nonionic water-soluble cellulosic polymer that provides thickening. Non-GMO	■	NA	NA
	Silicone Waxes	DOWSIL™ 2501/2511 Cosmetic Wax	100%	1-5%	Bis-PEG-18 Methyl Ether Dimethyl Silane	Water-dispersible silicone wax. Melting point: 36°C-42°C. Foam booster and film former. Increases viscosity, reduces tackiness and provides moisturizing effect	■	■	■
DOWSIL™ SW-8005 C30 Resin Wax		100%	1-3%	C30-45 Alkyldimethylsilyl Polypropyl-silsesquioxane	Silicone resin wax. Melting point: 63°C-71°C. Rheology and texture modifier for O/W, W/O and anhydrous formulations. Film former, provides water resistance	■	■	■	
Formulation aids	Emulsifiers	DOWSIL™ 5200 Formulation Aid	100%	0.5-5%	Lauryl PEG/ PPG-18/18 Methicone	Emulsifier for W/O or W/Wax formulations. Incorporation of high level of water or humectant possible with good sensory profile	■	■	■
		DOWSIL™ OFX-5329 Fluid	100%	0.5-5%	PEG-12 Dimethicone	Emulsifier for O/W or Si/W formulations. Compatible with a variety of oils. Provides dry hair with a soft feel and detangling of wet hair	■		
		DOWSIL™ ES-5600 Silicone Glycerol Emulsifier	100%	0.5-5%	Cetyl Diglyceryl Tris (Trimethylsiloxy) Silylether Dimethicone	Emulsifier for standard and PEG-free W/O or W/Si formulations. Low-viscosity formulations can be achieved. Enhances sensory attributes		■	■

These are typical properties, not to be construed as specifications.

*INCI name will depend on FOAMYSENSE™ Water Soluble Resin product chosen

**Except for CELLOSIZETM HEC QP-100MH



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