Personal Care

Hair Care Solutions

A tool for choosing the right solution

DOW®

Innovative, versatile solutions for hair cleansing, conditioning and styling

Consumers are searching for multifunctional hair care products that are designed with their individual needs in mind. And when it comes to cleansing, conditioning and styling they want soft, touchable hair with easy combing, color retention, enhanced shine, increased volume, frizz control, long lasting hold - 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**.

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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.

Hair styling with style and substance

When it comes to developing hair styling products that provide style and substance, Dow can help you meet and exceed your customers' expectations. Developing creams, gels, mousses, pomades, sprays and other hair styling products that differentiate you from your competition is made easier with Dow's broad portfolio of hair care ingredients.

Shampoos

Conditioning polymers – shampoos

Product families	Products	INCI name	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	Sustainability claim
Silicone polyether fluids and emulsions	XIAMETER™ OFX-0193 Fluid	PEG-12 Dimethicone	100%	1-3%	L	■			■		■						■	■	■		
	XIAMETER™ OFX-5330 Fluid	PEG/PPG-15/15 Acetate Dimethicone (and) PEG/PPG-15/15 Allyl Ether Acetate (and) PEG/PPG-15/15 Acetate	100%	1-3%	L	■			■		■	■	■								
	DOWSIL™ CE-1874 Microemulsion	PEG-7 Dimethicone (and) Laureth-7 (and) Polysorbate 20	30%	1-5%	M	■	■		■		■	■	■	■			■	■	■	Color protection, long-lasting hydrophobicity	
Dimethyl silicone emulsions	XIAMETER™ MEM-2664 Emulsion	Dimethicone (and) Laureth-4 (and) Laureth-23	50%	2-4%	M				■		■	■	■				■	■	■		
	DOWSIL™ CE-1785 BA Emulsion	Dimethiconol (and) TEA-Dodecylbenzenesulfonate	60%	2-4%	M				■		■	■					■			Reduced static	
	XIAMETER™ CE-1788 POE Emulsion	Dimethiconol (and) TEA-Dodecylbenzenesulfonate	51%	2-4%	M				■		■	■					■				
	XIAMETER™ 7137 R Emulsion	Dimethicone (and) Cocamidopropyl Betaine (and) C12-15 Alketh-3 (and) Guar Hydroxypropyltrimonium Chloride	65%	2-4%	M				■		■	■					■	■			
	DOWSIL™ HMW 2220 Emulsion	Divinyldimethicone/Dimethicone Copolymer (and) C12-13 Alketh-23 (and) C12-13 Alketh-3	60%	2-4%	M		■		■		■	■	■	■			■	■	■	Long-lasting hydrophobicity, Increased fragrance intensity and long lasting	
Amino silicone fluids	DOWSIL™ 2-8566 Amino Fluid	Amodimethicone	100%	1-3%	M	■			■		■	■	■				■			Reduced static, long-lasting hydrophobicity	
	DOWSIL™ AP-8087 Fluid	Bis-Hydroxy/Methoxy Amodimethicone	100%	1-3%	H				■		■	■						■	■		
	DOWSIL™ 8500 Conditioning Agent	Bis (C13-15 Alkoxy) PG Amodimethicone	100%	1-3%	M	■			■		■	■	■	■			■	■	■	Reduced static, long-lasting hydrophobicity	
	DOWSIL™ AP-8568 Amino Fluid	Amodimethicone	100%	1-3%	M	■			■		■	■	■				■	■	■	Heat protection, decreases fly-away hair	
	HydroxySHIELD™ Polymer	Bis-Diisopropanolamino-PG-Propyl Disiloxane/ Bis-Vinyl Dimethicone Copolymer	90%	1-2%	H		■		■		■	■						■	■	Color protection	
Amino silicone emulsions	DOWSIL™ CE-8170 AF Microemulsion	Amodimethicone (and) C11-15 Alketh-7 (and) Laureth-9 (and) Glycerin (and) Trideceth-12	20%	4-10%	M	■			■		■	■	■	■			■			Reduced static, color protection	
	DOWSIL™ CE-1689 Smoothing Emulsion	Dimethicone (and) Amodimethicone (and) Laureth-23 (and) Polyquaternium-10 (and) Laureth-4	60%	1-3%	H				■		■	■					■	■	■	Color protection	
	DOWSIL™ 5-7113/ CE-7114 Silicone Quat Microemulsion	Silicone Quaternium-16 (and) Undeceth-11 (and) Butyloctanol (and) Undeceth-5	22%	1-4%	H	■			■		■	■					■	■	■		
	DOWSIL™ CE-8411 Smooth Plus Emulsion	Bis-Diisopropanolamino-PG-propyl Dimethicone/ Bis-Isobutyl PEG-14 Copolymer (and) Polysorbate 20 (and) Butyloctanol	56%	1-5%	H				■		■	■	■	■			■				
	DOWSIL™ 969 Emulsion	Amodimethicone (and) Cetrimonium chloride (and) Trideceth-3 (and) Trideceth-15	30%	3-6%	H				■		■	■					■	■	■		
	DOWSIL™ 979 Emulsion	Amodimethicone (and) C11-15 Alketh-12 (and) C11-15 Alketh-7	50%	1-6%	H		■		■		■	■					■	■	■	Long-lasting hydrophobicity	Low aquatic toxicity
Cationically substituted cellusosics	UCARE™ Polymer JR-125	Polyquaternium-10	100%	0.2-0.4%	L	■	■		■		■	■		■	■		■	NA	NA	Synergy with FOAMYSENSE™ Water Soluble Resins provides enhanced conditioning and deposition	Biobased carbon weight: 48%, non-GMO
	UCARE™ Polymer LR-400	Polyquaternium-10	100%	0.2-0.4%	M	■	■		■		■	■		■	■		■	NA	NA	Synergy with FOAMYSENSE™ Water Soluble Resins provides enhanced conditioning and deposition	Biobased carbon weight: 55%, non-GMO
	UCARE™ Polymer JR-400	Polyquaternium-10	100%	0.2-0.5%	M	■	■	■	■		■	■		■	■	■	■	NA	NA	Synergy with FOAMYSENSE™ Water Soluble Resins provides enhanced conditioning and deposition	Biobased carbon weight: 48%
	UCARE™ Polymer LR-30M	Polyquaternium-10	100%	0.2-0.4%	MH	■	■	■	■		■	■		■	■	■	■	NA	NA	Synergy with FOAMYSENSE™ Water Soluble Resins provides enhanced conditioning and deposition	Biobased carbon weight: 55%, Halal, Kosher
	UCARE™ Polymer JR-30M	Polyquaternium-10	100%	0.2-0.5%	MH	■	■	■	■		■	■		■	■	■	■	NA	NA	Synergy with FOAMYSENSE™ Water Soluble Resins provides enhanced conditioning and deposition	Biobased carbon weight: 48%, Halal, Kosher
	UCARE™ Extreme Polymer	Polyquaternium-10	100%	0.1-0.3%	H	■	■	■	■		■	■			■	■	■	NA	NA		Non-gmo, biodegradable
	SoftCAT™ SL-5 Polymer	Polyquaternium-67	100%	0.2-0.4%	H	■	■	■	■		■	■		■	■	■	■	NA	NA	Synergy with FOAMYSENSE™ Water Soluble Resins provides enhanced conditioning and deposition, color protection	Halal, kosher
	SoftCAT™ SL-30 Polymer	Polyquaternium-67	100%	0.2-0.4%	H	■	■	■	■		■	■		■	■	■	■	NA	NA	Synergy with FOAMYSENSE™ Water Soluble Resins provides enhanced conditioning and deposition, color protection	Halal, Kosher
	SoftCAT™ SL-100 Polymer	Polyquaternium-67	100%	0.2-0.4%	H	■	■	■	■		■	■		■	■	■	■	NA	NA	Synergy with FOAMYSENSE™ Water Soluble Resins provides enhanced conditioning and deposition, color protection	Halal, Kosher
	SoftCAT™ SX-400X Polymer	Polyquaternium-67	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	Non-GMO
	SoftCAT™ SX-1300X Polymer	Polyquaternium-67	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	Halal, Kosher

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	INCI name	Products	Active content	Recommended use level in a formulation	Key features and benefits	Approved for China	Sustainability claim
Deposition aid polymer	Dextran	Dextran Hydroxypropyltrimonium Chloride	DEXCARE™ CD-1 Polymer	30%	0.2-0.5%	Renewable raw material with inherent ultimate biodegradability working as a deposition aid for silicones and natural oils. Can be formulated in to opaque and clear shampoos, with and without sulfates. Boosts shampoo's conditioning effectiveness.	■	Non-GMO, bio-derived, renewable, inherent ultimate biodegradable
Appearance	Opacifiers	Styrene/Acrylates Copolymer	OPULYN™ 301 Opacifier	40%	0.1-1.0%	Used to create a rich, creamy or lotionized look and feel. Excellent formulation compatibility and stability	■	
Cleansing	Surfactants	Lauryl Glucoside	EcoSense™ 1200 Surfactant	50%	1-15%	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
		Coco-Glucoside	EcoSense™ 919 Surfactant	50%	1-15%		■	Cosmos, Rspo, Ecocert
		Decyl Glucoside	EcoSense™ 3000 Surfactant	51%	1-15%		■	Cosmos, Rspo, Ecocert, Natural Origin Content (ISO 16128),
		Caprylyl/Capryl Glucosides/ Xylosides	EcoSense™ APP-1000 Surfactant	60%	—	Non-ionic Alkyl polyglycoside > 99 % nature-derived, produced by green chemistry principles. Used at low level to boost the performance of other bio-based surfactants enabling 100% naturally derived formulations. Provides high clarity and good foam quantity as a primary or secondary surfactant.		100% Natural Index (ISO 16128), Non-GMO, Readidily biodegradable, RSPO mass balanced
		Glycolipids	EcoSense™ GL-60 HA Surfactant	53%	0.5–6.0% (active)	Naturally derived bio-surfactant with emulsifying properties. Sophorlipids with medium to high HLB. Contains a high percentage of the acid form. Milder versus traditional surfactants. Effective solubilizer of essential oils/fragrances. Sugar and canola oil based.	■	Non-GMO, Readily biodegradable
		Glycolipids	EcoSense™ GL-60 HL Surfactant	53%	0.5–6.0% (active)	Naturally derived bio-surfactant with emulsifying properties. Sophorolipid with low HLB. Contains a high percentage of the lactone form. Milder versus traditional surfactants. Effective solubilizer of essential oils/ fragrances. Sugar and canola oil based.	■	Non-GMO, Readily biodegradable
Sensory enhancement- foam enhancers	Cellulosic Thickeners	Hydroxypropyl Methylcellulose	CELLOSIZE™ Texture 40-0202 Hydroxypropyl Methylcellulose	100%	0.2-1.5%	Enhances foam generation, providing rich, creamy cleansing formulas. Enables low surfactant formulas with improved mildness and fragrance deposition	■	Bio-based carbon: 69%
	Nonionic Polymers of EO	PEG-X*	FOAMYSENSE™ Water Soluble Resins Series	100%	0.05-0.2%	Improves the foam and feel in shampoo	■	
Sensory enhancement- lubricity	Nonionic Polymers of EO	PEG-X*	FOAMYSENSE™ Water Soluble Resins Series	100%	0.05-0.2%	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	■	
	ACULYN™ Rheology Modifiers: Hydrophobically Modified ASE (HASE)	Acrylates/Steareth-20 Methacrylate Copolymer	ACULYN™ 22 Rheology Modifier	30%	2-8%	First choice for shampoo. Broad surfactant compatibility. Slightly elongational texture. A very efficient thickener for difficult-to-thicken surfactant systems	■	Non-gmo
		Acrylates/Beheneth-25 Methacrylate Copolymer	ACULYN™ 28 Rheology Modifier	20%	4-8%	Most efficient thickener for viscosity build. Jelly-like texture	■	Mon-GMO, Halal, Kosher
		Acrylates/Steareth-20 Methacrylate Crosspolymer	ACULYN™ 88 Rheology Modifier	29%	2-7%	Crosslinked. Honey-like flow. Some suspension	■	Halal, Kosher
	ACULYN™ Rheology Modifiers: Alkali Swellable Emulsion (ASE)	Acrylates/Vinyl Neodecanoate Crosspolymer	ACULYN™ 38 Rheology Modifier	29%	2-7%	Good for suspension at neutral pH	■	Halal, Kosher
		Acrylates copolymer	ACULYN™ 33A Rheology Modifier	28%	2-7%	Good suspending properties for non-clear systems	■	Halal, Kosher
	Cellulosic Thickeners	Hydroxyethyl Cellulose	CELLOSIZE™ Hydroxyethyl Cellulose PCG-10	100%	0.2-1%	Nonionic water-soluble thickeners that provide efficient thickening and viscosity modification with broad compatibility. Dispersible in cold water	■	Bio-based carbon weight: 60%, inherent primary biodegradable
		Hydroxyethyl Cellulose	CELLOSIZE™ QP Hydroxyethyl Cellulose Series	100%	0.2-1.5%		■	Non-GMO Wood PECF certified**
		Hydroxypropyl Methylcellulose	CELLOSIZE™ Texture 40 Hydroxypropy Series	100%	0.2-1.5%	Nonionic water-soluble cellulosic polymer that provides thickening. Exhibits foam enhancement properties in cleansing applications	■	Non-GMO
Viscosity control	Copolymers of EO and PO	PPG-12-Buteth-16	UCON™ Lubricant 50-HB-660	100%	0.025-0.125%	In surfactant-thickened shampoo systems, UCON™ fluids can be used for fine control of viscosity to meet performance and aesthetic benefits	■	
		PPG-28-Buteth-35	UCON™ Lubricant 50-HB-3520	100%	0.025-0.125%		■	

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

**Except for CELLOSIZE™ HEC QP-100MH

Rinse-off conditioners

Conditioning polymers – rinse-off conditioners

Product families	Products	INCI name	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)	Low VMS (<0.1% in D6)	Additional benefits	Sustainability claim
Silicone polyether fluids	XIAMETER™ OFX-0193 Fluid	PEG-12 Dimethicone	100%	1-3%	L	■		■	■		■							■	■	■		
	XIAMETER™ OFX-5330 Fluid	PEG/PPG-15/15 Acetate Dimethicone (and) PEG/PPG-15/15 Allyl Ether Acetate (and) PEG/PPG-15/15 Acetate	100%	1-4%	L	■		■	■		■				■							
Silicone blends	XIAMETER™ PMX-1501 Fluid	Cyclopentasiloxane (and) Dimethiconol	15%	2-6%	M			■	■		■	■	■					■			Decreases fly-away hair	
	XIAMETER™ PMX-1503 Fluid	Dimethicone (and) Dimethiconol	12%	2-4%	M			■	■		■	■	■					■				
	DOWSIL™ PMX-1504 Fluid	C11-13 Isoalkane (and) Isohexadecane (and) Dimethiconol	27%	1-3%	M			■	■		■	■	■				■	■	■	■		Non-GMO
	DOWSIL™ PMX-1505 Fluid	Isododecane (and) Dimethiconol	15%	2-6%	M			■	■		■	■	■				■	■	■	■		Non-GMO, suitable for Vegan
	DOWSIL™ PMX-1507 Fluid	Dimethicone (and) Dimethiconol	18.5%	1.6-4.9%	M			■	■		■	■	■				■	■	■	■		Non-GMO
	DOWSIL™ PMX-1508 Fluid	C13-15 Alkane (and) Dimethiconol	20.5%	1.5-4.4%	M			■	■		■	■	■				■	■	■	■		Non-GMO, Halal, ISO 16128, Vegan-like, natural orign content 76%
Dimethyl emulsions	XIAMETER™ MEM-2664 Emulsion	Dimethicone (and) Laureth-4 (and) Laureth-23	50%	2-4%	M			■	■		■		■					■	■	■		
	DOWSIL™ HMW 2220 Non-Ionic Emulsion	Divinyldimethicone/Dimethicone Copolymer (and) C12-13 Alketh-23 (and) C12-13 Alketh-3	60%	1-3%	M			■	■		■				■			■	■	■		
Amino silicone fluids	DOWSIL™ 2-8566 Amino Fluid	Amodimethicone	100%	1-4%	M			■	■		■		■		■			■				
	DOWSIL™ AP-8087 Fluid	Bis-Hydroxy/Methoxy Amodimethicone	100%	1-4%	M			■	■		■				■	■			■	■		
	DOWSIL™ 8500 Conditioning Agent	Bis (C13-15 Alkoxy) PG Amodimethicone	100%	1-2%	H	■		■	■		■	■	■	■	■	■	■	■	■	■		
	DOWSIL™ AP-8568 Amino Fluid	Amodimthicone	100%	1-4%	M			■	■		■		■		■			■	■	■	Heat protection, decreases fly-away hair	
	HydroxySHIELD™ Polymer	Bis-Diisopropanolamino-PG-Propyl Disiloxane/Bis-Vinyl Dimethicone Copolymer	90%	1-2%	H	■	■	■	■		■				■	■	■		■	■	Heat protection, fast drying	
Amino silicone emulsions	DOWSIL™ CE-8170 AF Microemulsion	Amodimethicone (and) C11-15 Alketh-7 (and) Laureth-9 (and) Glycerin (and) Trideceth-12	20%	2-10%	M	■		■	■		■	■	■	■	■			■				
	DOWSIL™ CE-1689 Smoothing Emulsion	Dimethicone (and) Amodimethicone (and) Laureth-23 (and) Polyquaternium-10 (and) Laureth-4	60%	1-3%	M				■		■							■	■	■		
	DOWSIL™ CE-7081/ CE-7080 Smart Style	Silicone Quaternium-16/Glycidoxy Dimethicone Crosspolymer (and) Undeceth-11 (and) Undeceth-5	24%	2-8%	H		■	■	■		■				■	■	■					
	XIAMETER™ MEM-0949 Emulsion	Amodimethicone (and) Cetrimonium Chloride (and) Trideceth-12	36%	2-6%	H			■	■		■	■	■	■	■			■			Fast drying	
	DOWSIL™ 969 Emulsion	Amodimethicone (and) Cetrimonium chloride (and) Trideceth-3 (and) Trideceth-15	30%	3-7%	H		■	■	■		■	■				■	■	■	■	■	Heat protection, fast drying, ease of styling	
	DOWSIL™ 979 Emulsion	Amodimethicone (and) C11-15 Alketh-12 (and) C11-15 Alketh-7	50%	1-6%	H		■	■	■		■	■			■	■	■	■	■	■	Fast drying, effective at low use level, effective deposition, homogeneous hair coverage	Low aquatic toxicity
	DOWSIL™ 5-7113/ CE-7114 Silicone Quat Microemulsion	Silicone Quaternium-16 (and) Undeceth-11 (and) Butyloctanol (and) Undeceth-5	22%	2-6%	H	■	■	■	■		■		■	■	■		■	■	■	■	Fast drying	
	DOWSIL™ CE-8411 Smooth Plus Emulsion	Bis-Diisopropanolamino-PG-propyl Dimethicone/ Bis-Isobutyl PEG-14 Copolymer (and) Polysorbate 20 (and) Butyloctanol	56%	1-5%	H		■	■	■		■	■		■	■		■	■			Fast drying, heat protection	
Cationically substituted cellusosics	UCARE™ Extreme Polymer	Polyquaternium-10	100%	0.1-0.3%	H	■	■	■	■		■					■	■	■	NA	NA	Improved styling and manageability, enhanced oil deposition, heat protection, frizz control, fiber alignment	Non-GMO, biodegradable
	SoftCAT™ SX-1300X Polymer	Polyquaternium-67	100%	0.2-0.4%	H	■	■	■	■		■	■						■	NA	NA	Volume and frizz control, synergy with FOAMYSENSE™ Water Soluble Resins for enhanced conditioning benefits	Halal, Kosher

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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 – rinse-off conditioners

Function	Product family	INCI name	Products	Active content	Recommended use level in a formulation	Key features and benefits	Approved for China	Sustainability claim
Sensory enhancement- lubricity	Nonionic Polymers of EO	PEG-X*	FOAMYSENSE™ Water Soluble Resin Series	100%	0.05-0.2%	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	PPG-14 Butyl Ether	Fluid AP	~100%	0.2-10%	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)	PEG-150/Decyl Alcohol/SMDI Copolymer	ACULYN™ 44 Rheology Modifier	35%	1-5%	Nonionic. Good for difficult-to-thicken systems. Excellent salt, pH and cationic tolerance. Hydrophobic materials needed with which to associate. Creamy texture.	■	Non-GMO, Halal, Kosher
	Cellulosic Thickeners	Hydroxyethyl Cellulose	CELLOSIZE™ Hydroxyethyl Cellulose QP Series	100%	0.2-1%	Nonionic water-soluble thickeners that provide efficient thickening and viscosity modification with broad compatibility. Dispersible in cold water. Non-GMO Wood PECF certified**	■	
		Hydroxyethyl Cellulose	CELLOSIZE™ Hydroxyethyl Cellulose PCG-10	100%	0.2-1%	Nonionic water-soluble thickeners that provide efficient thickening and viscosity modification with broad compatibility. Dispersible in cold water.	■	Bio-based carbon weight: 60%, inherent primary biodegradable
		Hydroxypropyl Methylcellulose	CELLOSIZE™ Texture 40 Hydroxypropyl Methylcellulose Series	100%	0.2-0.5%	Nonionic water-soluble cellulosic polymer that provides thickening	■	

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*INCI name will depend on FOAMYSENSE™ Water Soluble Resin product product chosen
**Except for CELLOSIZE™ HEC QP-100MH

Leave-in conditioners

Conditioning polymers – leave-in conditioners

Product families	Products	INCI name	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	Sustainability claim
Silicone polyether fluids and emulsions	XIAMETER™ OFX-0193 Fluid	PEG-12 Dimethicone	100%	1-5%	L	■	W	■	■	■										■	■	■	Resin plasticizer	
	XIAMETER™ OFX-5330 Fluid	PEG/PPG-15/15 Acetate Dimethicone (and) PEG/PPG-15/15 Allyl Ether Acetate (and) PEG/PPG-15/15 Acetate	100%	1-5%	L	■	W	■	■	■		■												
	DOWSIL™ CE-1874 Microemulsion	PEG-7 Dimethicone (and) Laureth-7 (and) Polysorbate 20	30%	1-5%	L	■	W		■	■										■	■	■		
Silicone blends	DOWSIL™ CB 3046 Fluid	Dimethicone (and) Phenyl Trimethicone (and) Trimethylsiloxysilicate (and) Dimethiconol	100%	5-15%	M	■ (Anhydrous)	AW			■		■			■		■		■	■	■		Volume control, fiber alignment, curl definition	
	XIAMETER™ PMX-1501 Fluid	Cyclopentasiloxane (and) Dimethiconol	15%	2-20%	M	■ (Anhydrous)	AW	■	■	■		■			■		■			■			Reduced frizz	
	XIAMETER™ PMX-1503 Fluid	Dimethicone (and) Dimethiconol	12%	2-10%	M	■ (Anhydrous)	AW	■	■	■		■			■		■			■				
	DOWSIL™ 3901 Liquid Satin Blend	Dimethicone (and) Dimethicone/Vinyl Dimethicone Crosspolymer	6.25%	3-20%	M	■ (Anhydrous)	AW		■	■		■	■		■		■		■	■	■	■	Curl retention and definition, fiber alignment	
	DOWSIL™ 3903 Liquid Satin Blend	Isododecane(and) Dimethicone/Vinyl Dimethicone Crosspolymer	7-8%	0.5-10%	M	■ (Anhydrous)	AW	■	■	■		■	■				■		■	■	■	■	Curl retention and definition, reduce frizz and fly-away hairs	
	DOWSIL™ PMX-1504 Fluid	C11-13 Isoalkane (and) Isohexadecane (and) Dimethiconol	27%	14-40%	M	■ (Anhydrous)	AW	■	■	■		■			■		■			■	■	■	Imparts split end repair, reduced friction	Non-GMO
	DOWSIL™ PMX-1505 Fluid	Isododecane (and) Dimethiconol	15%	20-60%	M	■ (Anhydrous)	AW	■	■	■		■			■		■			■	■	■	Imparts split end repair, reduced friction, volume control	Non-GMO, suitable for vegan
	DOWSIL™ PMX-1507 Fluid	Dimethicone (and) Dimethiconol	18.5%	4-55%	M	■ (Anhydrous)	AW	■	■	■		■			■		■			■	■	■	Imparts split end repair, reduced friction, volume control	Non-GMO
	DOWSIL™ PMX-1508 Fluid	C13-15 Alkane (and) Dimethiconol	20.5%	5-44%	M	■ (Anhydrous)	AW	■	■	■		■			■		■			■	■	■	Imparts split end repair, reduced friction, volume control	Non-GMO, Halal, ISO 16128, Vegan-like, natural origin content 76%
Dimethyl emulsions	DOWSIL™ HMW 2220 Non-Ionic Emulsion	Divinyldimethicone/Dimethicone Copolymer (and) C12-13 Alketh-23 (and) C12-13 Alketh-3	60%	1-5%	M		W	■	■	■		■		■	■	■		■		■	■	■	Reduced breakage	
	XIAMETER™ MEM-2664 Emulsion	Dimethicone (and) Laureth-4 (and) Laureth-23	50%	1-5%	M		W	■	■	■		■	■		■					■	■	■		
Amino silicone fluids	DOWSIL™ 2-8566 Amino Fluid	Amodimethicone	100%	1-5%	M		AW	■	■	■		■	■	■	■					■				
	DOWSIL™ AP-8087 Fluid	Bis-Hydroxy/Methoxy Amodimethicone	100%	1-5%	M		AW	■	■	■		■	■	■	■				■		■	■		
	DOWSIL™ 8500 Conditioning Agent	Bis (C13-15 Alkoxy) PG Amodimethicone	100%	2-6%	H	■	AW	■	■	■		■		■	■			■		■	■	■	Volume control	
	DOWSIL™ AP-8568 Amino Fluid	Amodimthicone	100%	1-5%	M		AW	■	■	■		■	■	■	■					■	■	■	Reduced fly-away hairs	
	HydroxySHIELD™ Polymer	Bis-Diisopropanolamino-PG-Propyl Disiloxane/Bis-Vinyl Dimethicone Copolymer	90%	1-2%	H	■	AW	■	■	■				■	■	■		■	■		■	■	Reduced breakage, fiber alignment	
Amino silicone emulsions	DOWSIL™ CE-8170 AF Microemulsion	Amodimethicone (and) C11-15 Alketh-7 (and) Laureth-9 (and) Glycerin (and) Trideceth-12	20%	2-10%	M	■	W	■	■	■		■	■	■						■				
	DOWSIL™ CE-7081 /CE-7080 Smart Style	Silicone Quaternium-16/Glycidoxy Dimethicone Crosspolymer (and) Undeceth-11 (and) Undeceth-5	24%	2-8%	H		W	■	■	■				■			■	■					Curl retention and definition, fiber alignment, reduced breakage	
	XIAMETER™ MEM-0949 Emulsion	Amodimethicone (and) Cetrimonium Chloride (and) Trideceth-12	36%	2-8%	H		W	■	■	■		■	■	■	■	■				■				
	DOWSIL™ 969 Emulsion	Amodimethicone (and) Cetrimonium Chloride (and) Trideceth-3 (and) Trideceth-15	30%	3-10%	H		W	■	■	■					■	■		■	■	■	■	■	Reduced breakage, fiber alignment	
	DOWSIL™ 979 Emulsion	Amodimethicone (and) C11-15 Alketh-12 (and) C11-15 Alketh-7	50%	1-6%	H		W	■	■	■		■		■	■	■		■	■	■	■	■	Reduced breakage, fiber alignment	Low aquatic toxicity
	DOWSIL™ 5-7113/ CE-7114 Silicone Quat Microemulsion	Silicone Quaternium-16 (and) Undeceth-11 (and) Butyloctanol (and) Undeceth-5	22%	2-8%	H	■	W	■	■	■				■	■	■		■		■	■	■		
	DOWSIL™ CE-8411 Smooth Plus Emulsion	Bis-Diisopropanolamino-PG-Propyl Dimethicone/Bis-Isobutyl PEG-14 Copolymer (and) Polysorbate 20 (and) Butyloctanol	56%	1-5%	H		W							■		■				■					
Other specialty silicones	DOWSIL™ 556 Cosmetic Grade Fluid	Phenyl Trimethicone	100%	2-5%	L		AW		■	■		■								■	■	■		
	DOWSIL™ 2-2078 Fluid	Aminopropyl Phenyl Trimethicone	100%	1-3%	L		AW		■	■		■	■	■	■		■				■	■	Volume control, fiber alignment	
	DOWSIL™ 9509 / PF-9510 Silicone Elastomer Suspension	Dimethicone/Vinyl Dimethicone Crosspolymer (and) C12-14 Alketh-12	65-68%	1-15%	L		AW			■				■							■	■	Sebum / oil absorption, powdery feel, scalp moisturization, texture builder	
	DOWSIL™ EP-9801 Hydro Cosmetic Powder	Dimethicone/Vinyl Dimethicone Crosspolymer (and) Silica (and) Butylene Glycol	100%	1-5%	L		AW			■										■	■	■	Sebum absorption, powdery feel	
	DOWSIL™ VM-2270 Aerogel Fine Particles	Silica Silylate	100%	0.5-5%	L		AW			■											■	NA	Sebum / oil absorption, viscosity enhancement of oil phase	
	DOWSIL™ OHX-0080 Fluid	Dimethiconol	100%	1-30%	L	■ (Anhydrous)	AW			■					■					■	■	■	Helps build viscosity in hair oils, non-greasy effect	
Cationically substituted cellusosics	UCARE™ Polymer LR-30M	Polyquaternium-10	100%	0.2-0.4%	MH	■			■	■		■					■			■	NA	NA	Enhanced fragrance deposition	Biobased carbon weight: 55%, Halal, Kosher
	UCARE™ Extreme Polymer	Polyquaternium-10	100%	0.1-0.3%	H	■		■							■		■		■	■	NA	NA	Curl retention	Non-GMO, biodegradable
	SoftCAT™ SX-1300X Polymer	Polyquaternium-67	100%	0.2-0.4%	H	■			■	■		■					■			■	NA	NA	Synergy with FOAMYSENSE™ Water Soluble Resins for enhanced conditioning	Halal, Kosher

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

Additional solutions – leave-in conditioners

Function	Product family	Products	INCI name	Active content	Recommended use level in a formulation	Key features and benefits	Approved for China	Low VMS (<0.1% in D4 and D5)	Low VMS (<0.1% in D6)	Sustainability claim
Sensory enhancement-lubricity and shine	Nonionic Polymers of EO	FOAMYSENSE™ Water Soluble Resin Series	PEG-X*	100%	0.05-0.2%	Provides enhanced wet combing, shine and conditioning feel. Syngeristic boost of conditioning with SoftCAT™ and UCARE™ polymers	■	NA	NA	
	Copolymers of EO and PO	Fluid AP	PPG-14 Butyl Ether	100%	0.2-10%	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: Hydrophobially Modified Ethoxylated Urethanes (HEUR)	ACULYN™ 44 Rheology Modifier	PEG-150/Decyl Alcohol/SMDI Copolymer	35%	1-5%	Nonionic. Good for difficult-to-thicken systems. Excellent salt, pH and cationic tolerance. Hydrophobic materials needed with which to associate. Creamy texture	■	NA	NA	Non-GMO, halal, kosher
	Cellulosic Thickeners	CELLOSIZE™ Hydroxyethyl Cellulose QP Series	Hydroxyethyl Cellulose	100%	0.2-1%	Nonionic water-soluble thickeners that provide efficient thickening and viscosity modification with broad compatibility. Dispersible in cold water Non-GMO Wood PECF certified**	■	NA	NA	
		CELLOSIZE™ Hydroxyethyl Cellulose PCG-10	Hydroxyethyl Cellulose	100%	0.2-1%	Nonionic water-soluble thickeners that provide efficient thickening and viscosity modification with broad compatibility. Dispersible in cold water	■	NA	NA	
		CELLOSIZE™ Texture 40 Hydroxypropyl Methylcellulose Series	Hydroxypropyl Methylcellulose	100%	0.2-0.5%	Nonionic water-soluble cellulosic polymer that provides thickening. Non-GMO	■	NA	NA	
	Silicone Waxes	DOWSIL™ 2501/2511 Cosmetic Wax	Bis-PEG-18 Methyl Ether Dimethyl Silane	100%	1-5%	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	C30-45 Alkyldimethylsilyl Polypropyl-silsesquioxane	100%	1-3%	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	Lauryl PEG/ PPG-18/18 Methicone	100%	0.5-5%	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	PEG-12 Dimethicone	100%	0.5-5%	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	Cetyl Diglyceryl Tris (Trimeth-ylsiloxy) Silylether Dimethicone	100%	0.5-5%	Emulsifier for standard and PEG-free W/O or W/Si formulations. Low-viscosity formulations can be achieved. Enhances sensory attributes		■	■	
		EcoSense™ APP-5000 Formulation Aid	Proposed INCI name: Myristyl/Stearyl Xylosides (and) Myristyl alcohol (and) Stearyl alcohol	98%	0.5- 2 %	Non-ionic emulsifier with HLB 9.0-9.5. Creates low viscosity oil-in-water emulsions Emulsify up to 40 % oils (vegetable oil, esters and silicones).		NA	NA	Non-GMO, RSPO mass balance, 100% natural index per ISO 16128. Xylose from lignocellulosic biomass (wood origin), Vegan
Styling polymer/ Film former	Bio-based Polymer	MaizeCare™ Polymer Series	Hydrolyzed Corn Starch	100%	0.5-5%	MaizeCare™ Styling Polymers are film-former and styling aid obtained from corn starch. They can range from exceptional stiffness to soft-touch styling. In addition, MaizeCare Clarity Polymer is exhibiting excellent gel clarity in water-based formulas.	■	NA	NA	Bio-based, biodegradable, 100% natural origin (ISO 16128)

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

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

**Except for CELLOSIZE™ HEC QP-100MH

Hair styling

Select the right product and technology for your application.			Curl activators	Hair creams	Hair gels, Clear	Hair relaxers, Perms	Hairspray / Pump	Mousse, Aerosol / Non-aerosol	Pomades, Glazes	Setting lotions	Spray gels
Hair styling polymers	**Product**	**INCI Name**									
MaizeCare™ Styling Polymers are bio-based, biodegradable, 100% natural origin (ISO 16128) film-former and styling aid obtained from corn starch. They can range from exceptional stiffness to soft-touch styling. In additon, MaizeCare™ Clarity Polymer is exhibiting excellent gel clarity in water-based formulas.	**MaizeCare™ Clarity Polymer**	Hydrolyzed Corn Starch	•	•	•		•	•	•	•	
	MaizeCare™ Polymer	Hydrolyzed Corn Starch	•	•			•	•	•	•	
	MaizeCare™ Style Polymer	Hydrolyzed Corn Starch	•	•			•	•	•	•	
Silicones	**Product**	**INCI Name**									
Silicones provide curl retention, curl definition, reduce hair fly away and frizz control. Enhance natural look and feel.	**DOWSIL™ CE 7081 Smart Style**	Silicone Quaternium-16/Glycidoxy/Dimethicone Crosspolymer (and)/Undeceth-11 (and) Undeceth-5	•	•					•	•	
	DOWSIL™ 3901 Liquid Satin Blend	Dimethicone (and) Dimethicone/Vinyl Dimethicone Crosspolymer	•	•					•	•	
	DOWSIL™ CB 3046 Fluid	Dimethicone (and) Phenyl Trimethicone (and) Trimethylsiloxysilicate (and) Dimethiconol	•	•					•	•	
	DOWSIL™ PMX-1504 Fluid	C11-13 Isoalkane (and) Isohexadecane (and) Dimethiconol	•	•					•	•	
	DOWSIL™ PMX-1505 Fluid	Isododecane (and) Dimethiconol	•	•					•	•	
	DOWSIL™ PMX-1507 Fluid	Dimethicone (and) Dimethiconol	•	•					•	•	
	DOWSIL™ PMX-1508 Fluid	C13-15 Alkane (and) Dimethiconol	•	•					•	•	
Conditioning polymers	**Product**	**INCI Name**									
Our range of conditioning polymers can help you meet all performance and cost targets, from light to intense conditioning and low-cost to luxury formulations for hair styling products.	**SoftCAT™ SX 400 X Polymer**	Polyquaternium-67		•	•			•			•
	UCARE™ Polymer JR-30M	Polyquaternium-10		•	•			•			•
	UCARE™ Polymer LK	Polyquaternium-10		•	•			•			•
	UCARE™ Extreme Polymer	Polyquaternium-10		•	•			•		•	
Lubricity aids	**Product**	**INCI Name**									
FOAMYSENSE™ Polymers provide outstanding lubricity and slip for an enhanced sensory and styling experience.	**FOAMYSENSE™ 301 Polymer**	PEG-90M			•						•
	FOAMYSENSE™ N80 Polymer	PEG-5M		•	•						•
	FOAMYSENSE™ N750 Polymer	PEG-7M		•	•						•
	FOAMYSENSE™ N3000 Polymer	PEG-14M			•						•
Rheology modifiers, thickeners and texturizers	**Product**	**INCI Name**									
Our broad portfolio of rheology modifiers and thickeners can help you enhance texture, provide suspension, adjust flow properties, and stabilize and thicken hair styling product formulations. We offer a variety of product chemistries to meet your needs, including acrylic-, cellulosic- and polyurethane-based technologies.	**ACULYN™ 22 Rheology Modifier**	Acrylates/Steareth-20 Methacrylate Copolymer	•		•					•	
	ACULYN™ 28 Rheology Modifier	Acrylates/Beheneth-25 Methacrylate Copolymer	•		•			•		•	•
	ACULYN™ 33A Rheology Modifier	Acrylates Copolymer			•						•
	ACULYN™ 38 Rheology Modifier	Acrylates/Vinyl Neodecanoate Crosspolymer	•					•		•	•
	ACULYN™ 44 Rheology Modifier	PEG-150/Decyl Alcohol/SMDI Copolymer	•	•					•		
	ACULYN™ 46N Rheology Modifier	PEG-150/Stearyl Alcohol/SMDI Copolymer	•	•		•			•		
	ACULYN™ 88 Rheology Modifier	Acrylates/Steareth-20 Methacrylate Crosspolymer	•	•	•			•			
	CELLOSIZE™ Texture 40-0100 Hydroxypropyl Methylcellulose	Hydroxypropyl Methylcellulose		•				•			
	CELLOSIZE™ Texture 40-0101 Hydroxypropyl Methylcellulose	Hydroxypropyl Methylcellulose		•				•			
	CELLOSIZE™ Texture 40-0202 Hydroxypropyl Methylcellulose	Hydroxypropyl Methylcellulose		•				•			

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Through its Home and Personal Care business, part of the Dow Consumer Solutions Portfolio, Dow offers unique innovations that empower brand owners around the world to create products with exceptional performance and exciting new benefits consumers can see and feel. Our expansive portfolio serves a wide range of applications across home and personal care markets from skin and hair care to fabric care and beyond. Our novel solutions help enable products that are unique and memorable, and meet the growing demands of today's consumers. We continue to bring forward innovative technologies and formulation solutions that differentiate our customers' products, enhance the consumer experience and sustain the environment. With business centers, research and development (R&D), manufacturing plants and customer applications centers around the globe, Dow has the expertise and foundation to foster global and local innovations.

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