



PERSONAL CARE

Film-formers for next-generation skin care and color cosmetics

Within each of us is an infinite capacity for beauty. Help consumers maximize and protect their beauty at every age with film-forming technologies from Dow ... and set your creative spirit free.

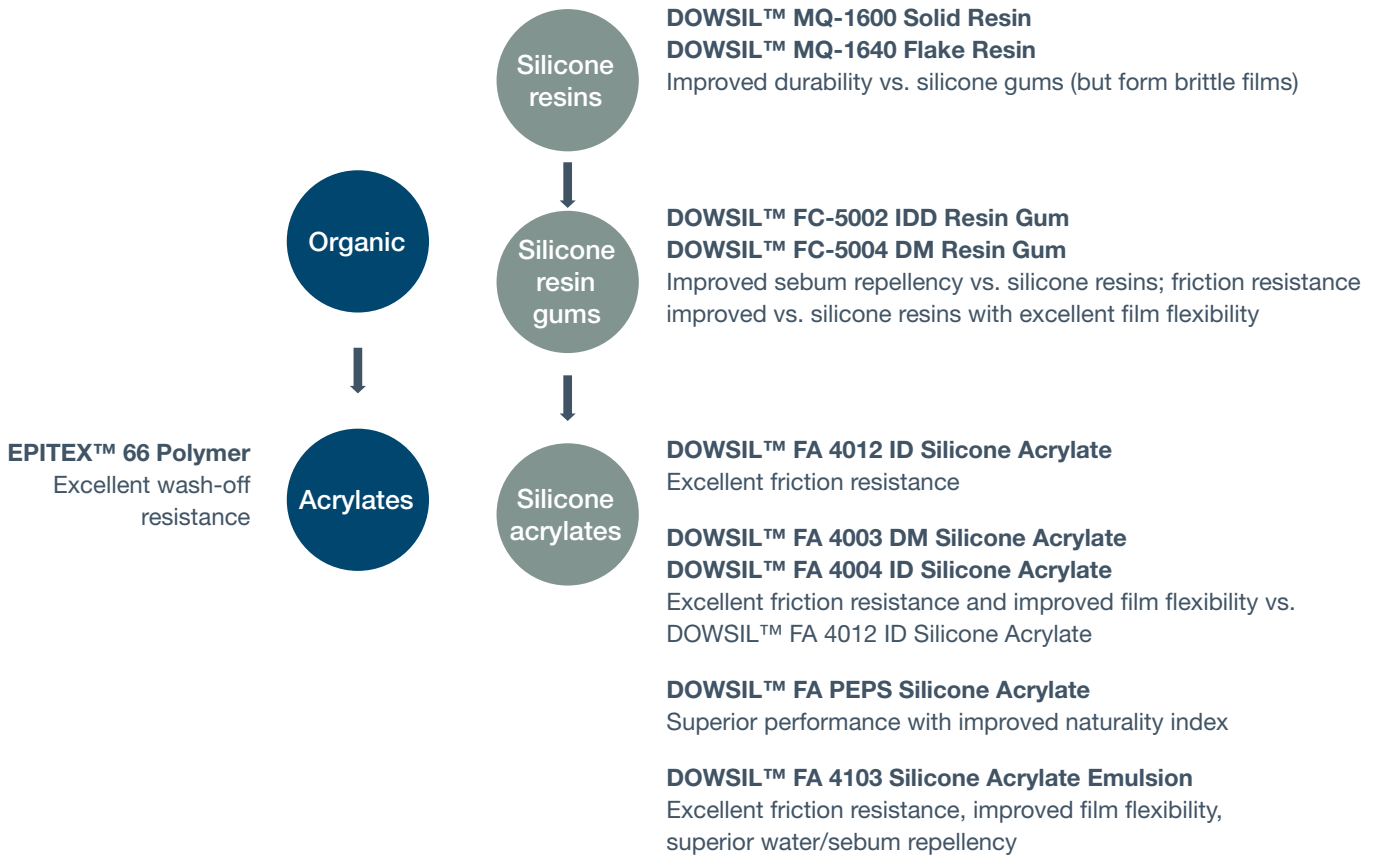
Film-formers are polymers capable of forming a cohesive and continuous film on keratinous surfaces with optimal adhesion and flexibility properties. They give you a different and complementary approach to meeting evolving consumer needs through the formation of a potentially long-lasting "second layer" over the skin.

This approach can be tailored:

- To your **application**
- To the **consumer's need**
- To deliver a **positive skin-care experience**



Film formers from Dow – differentiation overview



Offering ideal properties for personal care innovation

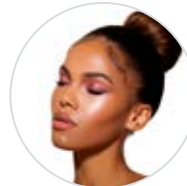
- Permeable to semi-occlusive
- Uniform and continuous
- Long-lasting and removable
- Comfort and sensory attributes



Skin Anti-Aging



Sun Care



Long-Lasting
Cosmetics



Skin Protection



Hair Care

Formulator Advantages	Consumer Advantages
Multiple film-forming technologies available for greater versatility	Use of non-occlusive materials to preserve skin health and breathability
Multiple carriers available for greater formulation and manufacturing-process flexibility	Variable film flexibility for wearing comfort and enjoyment
Good compatibility with common cosmetic ingredients, allowing incorporation in common product types, such as face care, sun care and color cosmetics	High sebum and water repellency as well as high rub-off resistance properties to provide outstanding long-lasting benefits and a rewarding daily skin-care experience

Explore our extensive film-former portfolio

TESTED WITH PURE FILM-FORMER AT 20% ACTIVE IN APPROPRIATE SOLVENT.

Technology	Product Trade Name	INCI Name	Visual Properties	Tactile Properties	Water Repellency ¹	Sebum Repellency ¹	Film Flexibility	Film Integrity ²	Rub-Off Resistance ³	Notes		
Silicone	Silicone Resins Silicone MQ Resin	DOWSIL™ MQ-1600 Solid Resin	Trimethylsiloxysilicate	Clear and shiny film with resin aggregates appearing if volatile organic solvent is used	Hard, brittle	High	Medium	Low	Low	Medium	Silicone benchmark technology for color cosmetics	
		DOWSIL™ RSN-0749 Resin	Cyclopentasiloxane (and) Trimethylsiloxysilicate									
		DOWSIL™ 593 Fluid	Dimethicone (and) Trimethylsiloxysilicate									
	Silicone MQ/Propyl Resin Blend	DOWSIL™ MQ-1640 Flake Resin	Trimethylsiloxysilicate (and) Polypropylsilsesquioxane	Clear and shiny film with resin aggregates appearing if volatile organic solvent is used	Medium hard, slightly brittle	High	Medium	Low	Low	Medium	Superior performance for skin care formulations, including tightening claims	
		Silicone Resin Gums	DOWSIL™ FC-5001 CM Resin Gum	Cyclopentasiloxane (and) Trimethylsiloxysilicate/Dimethiconol Crosspolymer	Clear and shiny film with no cracks appearing upon solvent evaporation	Soft, not brittle	High	Very high	High	Low to very high, depending on solvent	High	Ideal for foundation and eye shadow where sebum repellency and comfort are critical
	DOWSIL™ FC-5002 IDD Resin Gum		Isododecane (and) Trimethylsiloxysilicate/Dimethiconol Crosspolymer									
	DOWSIL™ FC-5004 DM Silicone Resin Gum		Dimethicone (and) Trimethylsiloxysilicate/Dimethiconol Crosspolymer									
	Silicone Acrylates	DOWSIL™ FA 4001 CM Silicone Acrylate	High Tg	Cyclopentasiloxane (and) Acrylates/Polytrimethylsiloxymethacrylate Copolymer	Clear and shiny film with few cracks appearing upon solvent evaporation	Slightly brittle	High	High	Low	Low	Very high	Superior performance in foundation and lipstick
				DOWSIL™ FA 4012 ID Silicone Acrylate								
		DOWSIL™ FA 4003 DM Silicone Acrylate	Low Tg	Dimethicone (and) Acrylates/Polytrimethylsiloxymethacrylate Copolymer	Clear and shiny film with no cracks appearing upon solvent evaporation	Soft, not brittle	High	High	High	Low to medium, depending on solvent	Very high	Superior performance for skin and BB/CC formulations, including anti-pollution claims
				DOWSIL™ FA 4004 ID Silicone Acrylate								
		DOWSIL™ FA 4103 Silicone Acrylate Emulsion	Low Tg	Acrylates/Polytrimethylsiloxymethacrylate Copolymer (and) Laureth-1 Phosphate	Clear and shiny film with no cracks appearing upon solvent evaporation	Soft, not brittle	High	Very high	High	Very high	Very high	Ideal choice for water-based formulations for foundation and mascara
DOWSIL™ FA PEPS		Undecane (and) Tridecane (and) Acrylates/Polytrimethylsiloxymethacrylate Copolymer		Clear and shiny film with no cracks appearing upon solvent evaporation	Soft, not brittle	High	High	High	Low to medium, depending on solvent	Very high	Excellent choice for foundation and lipstick where comfort and long wear are critical, allows formulations with a higher naturality content	
Organic	Organic Acrylates	EPITEX™ 66 Polymer	Acrylates Copolymer	Clear and shiny film with no cracks appearing upon solvent evaporation	Soft, not brittle	Low	Low	High	Very high	Very high	Superior performance in sun care beach products when water resistance is a must	

¹ Based on contact angle measurement (2 minutes after droplet deposition).

² Based on film integrity test (amount of diffused dye after 6 hours).

³ Tested by colourimeter at 5% active with 10% pigment (ΔE of transferred pigment on felt after 50 abrasion cycles).

Create Innovations with Dow

Accelerating innovation to the **point of differentiation** with finished product concepts for brand owners around the world

For more information

For technical data sheets, product samples and thought-starting formulations, visit dow.com.

How can we help you today?

When you need industry-leading innovation, we can help. Our personal care solutions are dedicated to meeting your needs for specialty materials, collaborative problem-solving and innovation support. Learn how we can help you bring your products to the point of differentiation at dow.com.



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