



Technical Data Sheet

DOWSIL™ EL-9080 Silicone Elastomer Blend

INCI Name: Cyclopentasiloxane (and) Dimethicone/Vinyl Dimethicone Crosspolymer

Features & Benefits

- Clear cross-linked silicone elastomer gel delivered in Cyclopentasiloxane
- Good compatibility with some organic and silicones oils
- Low color
- High clarity
- Less balling¹
- Improved viscosity maintained while diluting¹
- Acts as a thickening agent for silicone fluids

¹Compared to DOWSIL™ 9045 Silicone Elastomer Blend

Composition

- Approximately 13 weight percent polymer in a volatile fluid (Cyclopentasiloxane)

Applications

- Can be used in wide range of personal care products such as skin care, color cosmetics, sun care, and hair care
- Rheology and texture modifier in oil-in-water, water-in-oil emulsions and anhydrous gels

Typical Properties

Specification Writers: These values are not intended for use in preparing specifications.

Test	Property	Unit	Result
CTM0050 ¹	Viscosity	mm ² /s	250,000–550,000
	Appearance		Clear to Translucent Gel
CTM0208C ¹	Non-volatile Content	%	12.55–14.05%
Closed Cup	Flash Point	°C	85.5
	Cyclotetrasiloxane Level	%	< 0.1

1. Copies of corporate Test Methods are available upon request

How To Use

To incorporate DOWSIL™ EL-9080 Silicone Elastomer Blend into a formula, it should be combined with the oil or silicone phase. Disperse the oil into DOWSIL™ EL-9080 Silicone Elastomer Blend using simple mixing to achieve uniform dispersion. It is important for the elastomer blend to be uniformly dispersed in the oil/silicone phase before proceeding.

The viscosity of DOWSIL™ EL-9080 Silicone Elastomer Blend decreases as it is diluted with other oils. Figure 1 illustrates this effect when XIAMETER™ PMX-0245 Cyclopentasiloxane is used as the diluent.

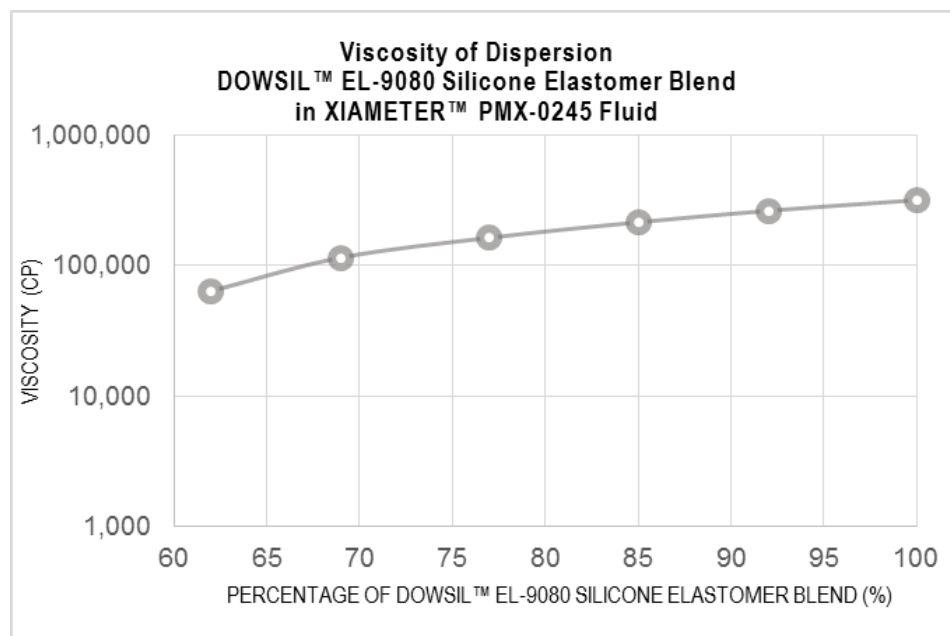


Figure 1: Dilution curve of DOWSIL™ EL-9080 Silicone Elastomer Blend, diluted with XIAMETER™ PMX-0245 Cyclopentasiloxane.

Formulation Tips

DOWSIL™ EL-9080 Silicone Elastomer Blend may be formulated into oil-in-water emulsions, water-in-silicone emulsions, water-in-oil emulsions and anhydrous products.

- It may be added to the oil phase or silicone phase in an emulsion formulation.
- For ease of use, its viscosity may be reduced by blending with low viscosity fluids.
- It is dispersible in a variety of liquid oils, as referenced in the compatibility chart in Table 1.
- Because the elastomer is stable, DOWSIL™ EL-9080 Silicone Elastomer Blend may be subjected to heat for a short duration. When heat is used, the material should be processed in an enclosed vessel to prevent the volatile carrier from volatilizing; the vessel should be inerted at temperatures over 60°C (140°F).

Formulation Tips
(Cont.)

Table 1: Compatibility with Common Cosmetic Ingredients at 75%

Wt.% DOWSIL™ EL-9080 Silicone Elastomer Blend:	75%
Esters:	
C12-15 alkyl benzoate	H
Caprylic/Capric Triglyceride	H
Isodecyl Neopentanoate	C
Hydrocarbons:	
Isododecane	C
Isohexadecane	C
Mineral Oil	C
Hydrophilics:	
Ethanol	NC
PPG-15 Stearyl Ether	O
Sunscreens:	
Ethylhexyl salicylate	C
Ethylhexyl methoxycinnamate	O/SC
Vegetable Oils:	
Sunflower Oil	O
Silicone fluids:	
Phenyl Trimethicone (DOWSIL™ 556 Cosmetic Grade Fluid)	C
Bis-hydroxyethoxypropyl Dimethicone (DOWSIL™ 5562 Carbinol Fluid)	NC
C = is Clear to Slight Haze; H = Hazy; O = Cloudy to Opaque; SC = Slightly Compatible; NC = Not Compatible	

DOWSIL™ EL-9080 Silicone Elastomer Blend has compatibility with some organic oils.

Handling
Precautions

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED IN THIS DOCUMENT. BEFORE HANDLING, READ PRODUCT AND SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE SAFETY DATA SHEET IS AVAILABLE ON THE DOW WEBSITE AT CONSUMER.DOW.COM, OR FROM YOUR DOW SALES APPLICATION ENGINEER, OR DISTRIBUTOR, OR BY CALLING DOW CUSTOMER SERVICE.

Limitations

This product is neither tested nor represented as suitable for medical or pharmaceutical uses.

Health And Environmental Information

To support customers in their product safety needs, Dow has an extensive Product Stewardship organization and a team of product safety and regulatory compliance specialists available in each area.

For further information, please see our website, consumer.dow.com or consult your local Dow representative.

consumer.dow.com

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