



Technical Data Sheet

DOWSIL™ FA 4001 CM Silicone Acrylate

INCI Name Cyclopentasiloxane (and) Acrylates/Polytrimethylsiloxymethacrylate Copolymer

Features & Benefits

- Film former
- Compatibility with organic sunscreens, pigments and cosmetic ingredients
- Additive in color cosmetics
- Durable foundation with comfort to wear
- Lipstick with long lasting, non-transfer and comfort properties
- Wash off resistance
- Sebum resistance and reduction
- Non-occlusive
- Flexible hold with bounce

Composition 30% polymer in cyclopentasiloxane

Applications Personal care applications including color cosmetic, sun care and hair care

Typical Properties

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

Test ¹	Property	Unit	Result
CTM 0176	Appearance		Clear to slightly hazy
CTM 004A	Viscosity at 25°C	mm ² /s	80–400
CTM 0002	Refractive index		1.415
CTM 0208	Non-volatile content, 1 g/150°C/3 hours	%	27.0–33.0
CTM 0006	Flash point - open cup	°C	77

¹CTM: Corporate Test Method, copies of CTMs are available on request.

Description

DOWSIL™ FA 4001 CM Silicone Acrylate is a blend of approximately 30% of acrylates/polytrimethyl-siloxymethacrylate copolymer in cyclopentasiloxane. After evaporation of the cyclopentasiloxane, the high molecular weight silicone acrylate copolymer forms a film on the skin.

How to Use

This is a low viscosity fluid that is easily incorporated into a variety of personal care formulations.

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Handling Precautions

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Usable Life and Storage

When stored at or below 32°C in the original unopened containers, this product has a usable life of 24 months from the date of production.

Packaging Information

This product is available in 190 kg drums and 16 kg pails.

Samples are available in 500 g bottles.

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.

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The information contained herein is offered in good faith and is believed to be accurate. However, because conditions and methods of use of our products are beyond our control, this information should not be used in substitution for customer's tests to ensure that our products are safe, effective, and fully satisfactory for the intended end use. Suggestions of use shall not be taken as inducements to infringe any patent.

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Table 1: Compatibilities with common cosmetic ingredients.

Ratio of DOWSIL™ FA 4001 CM Silicone Acrylate: other material	1:9	5:5	9:1
Esters			
C12-15 alcohol benzoate		C ¹	C
Caprylic/capric triglycerides	M ²	C	C
Coco-caprylate/caprate	M	C	C
Isopropyl isostearate	C	C	C
Isopropyl myristate	C	C	C
Isopropyl palmitate	C	C	C
Octylpalmitate	M	C	C
Octylstearate	M	C	C
Fatty alcohols/acids			
Octyldodecanol	M	M	C
Oleyl alcohol	M	M	C
Candelilla wax	NC ³	NC	C
Glycerides			
Glyceryl trioctanate	C	C	C
Hydrocarbons			
Mineral oil	M	C	C
Synthetic polymer			
Polyethylene	C	C	C
Hydrophilics			
Propylene glycol	M	M	M
Sunscreen agents			
Octyl dimethyl PABA	M	M	C
Ethylhexyl methoxycinnamate	M	M	C
Vegetable oils			
Castor oil	C	M	M
Jojoba oil	C	M	C
Lanolin oil	C	C	M
Sunflower oil	NC	NC	C
Silicones			
XIAMETER™ PMX-200 Silicone Fluid 100 cSt	M	M	C
XIAMETER™ PMX-200 Silicone Fluid 350 cSt	M	M	M
XIAMETER™ PMX-1401 Fluid	M	M	M
XIAMETER™ PMX-1413 Fluid	M	M	M
XIAMETER™ PMX-1501 Fluid	M	M	M
XIAMETER™ PMX-1503 Fluid	M	M	M
DOWSIL™ 2502 Cosmetic Fluid	M	M	M
DOWSIL™ 556 Cosmetic Grade Fluid	C	C	C
DOWSIL™ 2503 Cosmetic Wax	NC	NC	C
DOWSIL™ 593 Fluid	NC	NC	C
DOWSIL™ 9040 Silicone Elastomer Blend	C	C	C

1. C=Compatible

2. M=Miscible

3. NC=Not compatible

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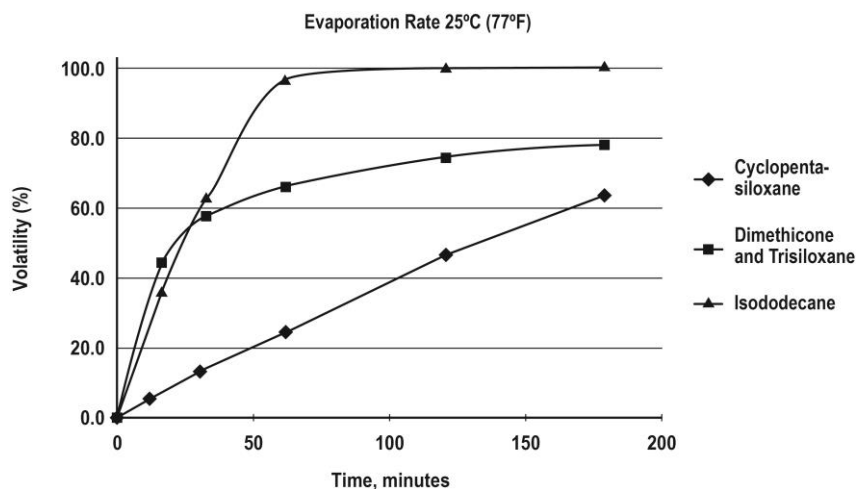


Figure 1: Evaporation profile of solvents - cyclopentasiloxane and isododecane.

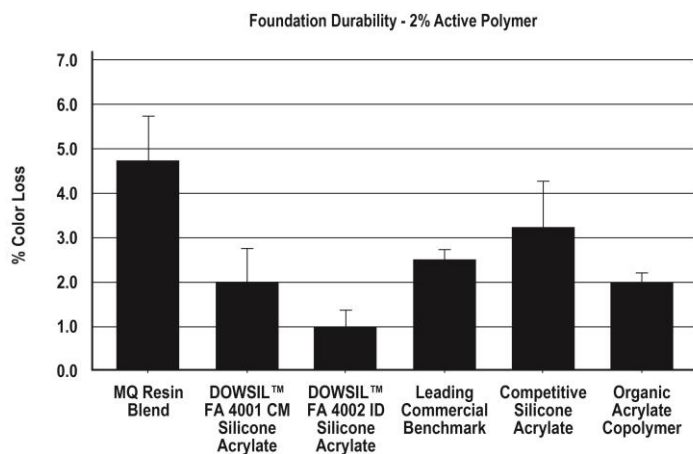


Figure 2: Foundation durability to evidence resistance of silicone acrylate copolymer compared to an MQ resin blend and a leading commercial product.

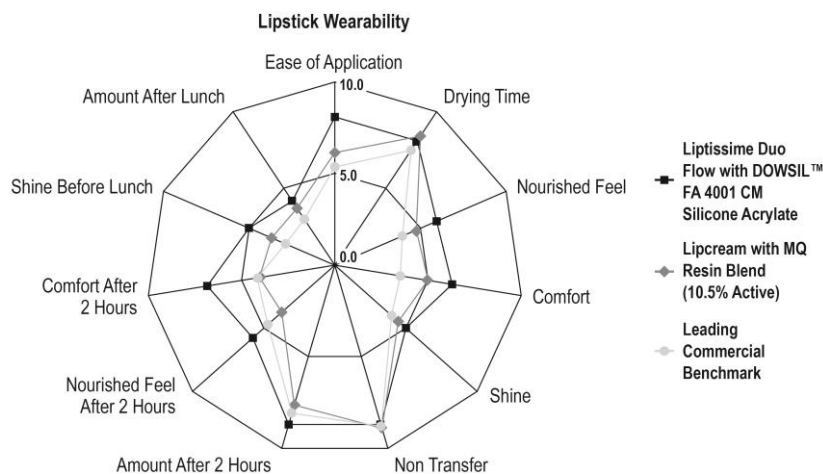


Figure 3: Lipstick wearability to evidence long lasting and comfort properties of silicone acrylate copolymer compared to an MQ resin blend and a leading commercial product.

