



Technical Data Sheet

DOWSIL™ FZ-3196 Fluid

FEATURES & BENEFITS

- Moderate volatility
- Compatible with a wide range of cosmetic ingredients
- Clear and colorless
- Low viscosity and surface tension
- Lowers surface tension of organic oils
- Co-solubilizer between silicone oil and hydrocarbon oil
- Nonflammable
- Nonocclusive
- Excellent spreadability
- Unique light, smooth and less dry feel
- Superior cleansing with no residue
- Improved gloss and color intensity in lipsticks
- Easy to handle and to formulate
- Improve spreadability, reduce tackiness and greasy feel of vegetable oils
- When sprayed on skin in deodorant formulation:
 - Long lasting fragrance retention capacity (up to 24 hrs.)
 - Immediate drying
 - No burning sensation
 - Soft and smooth feel
- Preference over alcohol when used in deodorant formulation

INCI NAME: Caprylyl Methicone

APPLICATIONS

- Carrier for other ingredients
- Dispersing medium for hydrophobic powders and pigments
- Can be used in a wide range of personal care applications such as:
 - Skin care (e.g., moisturizers, gels, make-up removers, facial cleansers)
 - Sun care
 - Color cosmetics (e.g., lipsticks)
 - Hair care (e.g., leave-on treatments)
 - Antiperspirant/deodorant

TYPICAL PROPERTIES

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

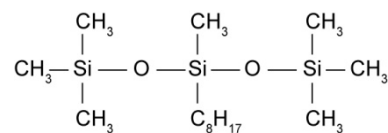
CTM ¹	Property	Unit	Result
0176	Appearance		Clear liquid, colorless to light amber, no significant particulates
0001	Specific gravity		0.84
0208	Nonvolatile content	%	0
0004	Viscosity at 25°C	mm ² /s	2–4
0002	Refractive index at 25°C		1.413
0006	Flash point - closed cup	°C	110
	Surface tension	mN/m	20.4
	Cyclotetrasiloxane (D4) content	%	< 0.1
	Cyclopentasiloxane (D5) content	%	< 0.1

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

DESCRIPTION

DOWSIL™ FZ-3196 Fluid is a caprylyl branched trisiloxane as described in Figure 1. The siloxane consists of three silicon atoms, which is the shortest Dimethicone, and an octyl group is attached on the middle silicon.

Figure 1: Chemical formula for DOWSIL FZ-3196 Fluid.



HOW TO USE

DOWSIL FZ-3196 Fluid is added into the oil phase and mixed until solved or dispersed evenly. Due to the presence of the caprylyl group on the silicone backbone, this ingredient has good compatibility with a wide range of organic ingredients and pigments while maintaining very good spreading.

This results in a less dry feel and a richer feel when compared to volatile silicones – but still very light due to the moderate volatility. Being nonflammable and very compatible, this material is easy to handle and to incorporate in a broad range of formulations including lipsticks and pigmented formulations. It can help to reduce white residues in formulations containing a high level of volatile materials. Recommended use level is between 5 and 20%.

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 WWW.CONSUMER.DOW.COM, OR FROM YOUR DOW SALES APPLICATION ENGINEER, OR DISTRIBUTOR, OR BY CALLING DOW CUSTOMER SERVICE.

USABLE LIFE AND STORAGE

When stored between 0°C and 40°C (32°F and 104°F) in the original unopened containers, this product has a usable life of 24 months from the date of production.

PACKAGING INFORMATION

These products are available in 15 kg cans and 168 kg drums.

Samples are available in 100 ml 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, www.consumer.dow.com or consult your local Dow representative.

LIMITED WARRANTY INFORMATION – PLEASE READ CAREFULLY

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.

Dow's sole warranty is that our products will meet the sales specifications in effect at the time of shipment.

Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted.

TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, DOW SPECIFICALLY DISCLAIMS ANY OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY.

DOW DISCLAIMS LIABILITY FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES.

www.consumer.dow.com

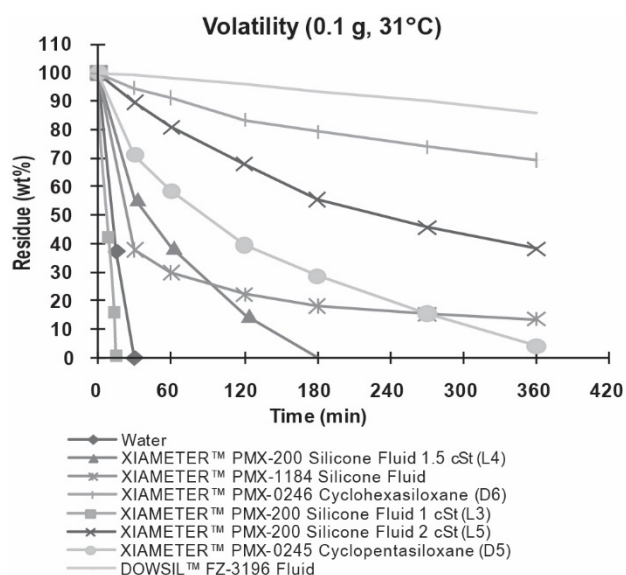
UNRESTRICTED – May be shared with anyone

®™Trademark of The Dow Chemical Company ("Dow") or an affiliated company of Dow

DOWSIL™ FZ-3196 Fluid

© 2017 The Dow Chemical Company. All rights reserved.

Volatility:



Compatibility:

Cosmetic Ingredients (INCI)	DOWSIL FZ-3196 Fluid		
	1:9	5:5	9:1
Esters:			
ISONONYL ISONONANOATE	C	C	C
CETYL ETHYLHEXANOATE	C	C	C
ISOPROPYL MYRISTATE	C	C	C
PENTAERYTHRITYL TETRAISOSTEARATE	C	C	C
C12-15 ALKYL BENZOATE	C	C	C
ISOPROPYL PALMITATE	C	C	C
OCTYLPALMITATE	C	C	C
Glycerides:			
TRIETHYLHEXANOIN	C	C	C
CAPRYLIC/CAPRIC TRIGLYCERIDE	C	C	C
POLYGLYCERYL-2 TRIISOSTEARATE	C	C	C
Fatty Alcohols/Acids:			
STEARYL ALCOHOL	C	NC	NC
ISOSTEARYL ALCOHOL	C	C	C
OLEYL ALCOHOL	C	C	C
STEARIC ACID	C	C	C
LAURYL ALCOHOL	C	C	C
OCTYLDODECANOL	C	C	C
Hydrocarbons:			
MINERAL OIL	C	C	C
HYDROGENATED POLYISOBUTENE	C	C	C
ISODODECANE	C	C	C

C = Compatible and NC = Not Compatible

Blend ratio is described in weight ratio as Silicone: Cosmetic Ingredients

UNRESTRICTED – May be shared with anyone

®™Trademark of The Dow Chemical Company (“Dow”) or an affiliated company of Dow

DOWSIL™ FZ-3196 Fluid

© 2017 The Dow Chemical Company. All rights reserved.

Compatibility (Continued):

	DOWSIL FZ-3196 Fluid		
Cosmetic Ingredients (INCI)	1:9	5:5	9:1
ISOHEXADECANE	C	C	C
ISOPARAFFIN	C	C	C
PETROLATUM	C	C	NC
Vegetable Oils:			
SIMMONDSIA CHINENSIS (JOJOBA) SEED OIL	C	C	C
OLEA EUROPAEA (OLIVE) FRUIT OIL	C	C	C
LANOLIN OIL	C	C	C
ALMOND OIL	C	C	C
CASTOR OIL	C	NC	NC
COCONUT OIL	C	C	C
CORN OIL	C	C	C
PALM OIL	C	C	C
SESAME OIL	C	C	C
SOYBEAN OIL	C	C	C
SUNFLOWER OIL	C	C	C
Miscellaneous:			
BEESWAX	C	C	C
EUPHORBIA CERIFERA (CANDELILLA) WAX	NC	NC	C
LANOLIN	C	C	C
Sunscreen Actives:			
ETHYLHEXYL METHOXYCINNAMATE	C	C	C
Hydrophilics:			
WATER	NC	NC	NC
ALCOHOL	C	C	C
ISOPROPYL ALCOHOL	C	C	C
GLYCERIN	NC	NC	NC
PROPYLENE GLYCOL	NC	NC	NC
BUTYLENE GLYCOL	NC	NC	NC
DOWSIL Materials:			
DOWSIL™ 556 Cosmetic Grade Fluid	C	C	C
DOWSIL™ 9040 Silicone Elastomer Blend	C	C	C
DOWSIL™ RSN-0749 Resin	C	C	C
XIAMETER™ Materials:			
XIAMETER™ PMX-200 Silicone Fluid 5 cSt	C	C	C
XIAMETER™ PMX-200 Silicone Fluid 350 cSt	C	C	C
XIAMETER™ PMX-0245 Cyclopentasiloxane	C	C	C
XIAMETER™ PMX-1501 Fluid	C	C	C
XIAMETER™ PMX-1503 Fluid	C	C	C

C = Compatible and NC = Not Compatible

Blend ratio is described in weight ratio as Silicone: Cosmetic Ingredients

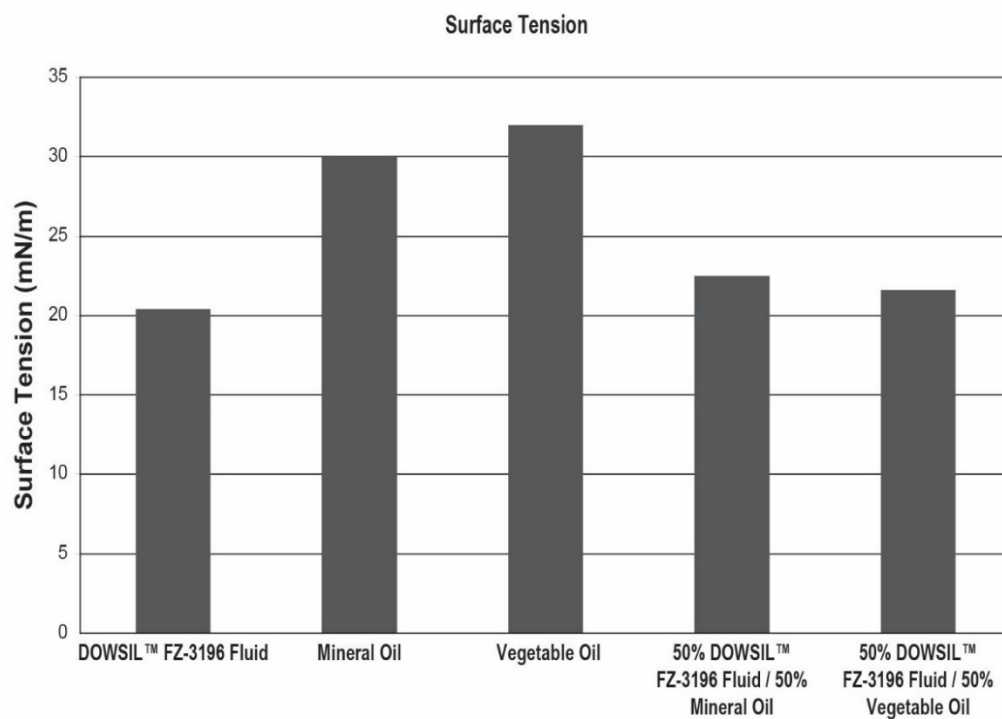
UNRESTRICTED – May be shared with anyone

®™Trademark of The Dow Chemical Company ("Dow") or an affiliated company of Dow

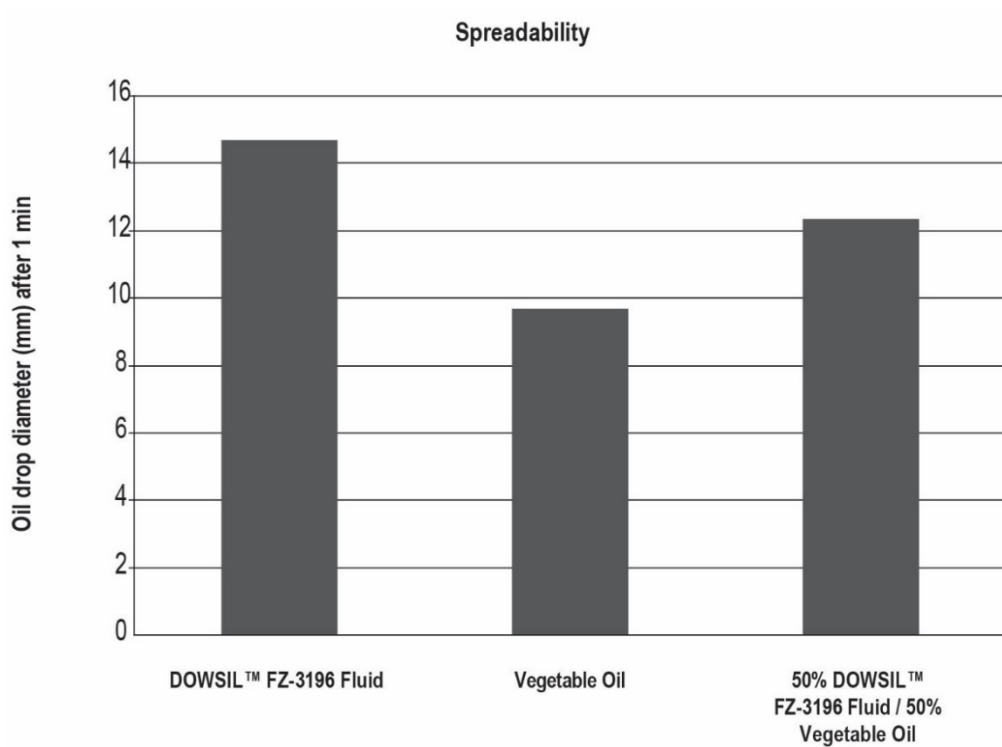
DOWSIL™ FZ-3196 Fluid

© 2017 The Dow Chemical Company. All rights reserved.

Reduction of Surface Tension of Mineral and Vegetable Oils (50/50 Blend):



Spreadability Measurements



®Trademark of The Dow Chemical Company

Form No. 27-1306-01 H