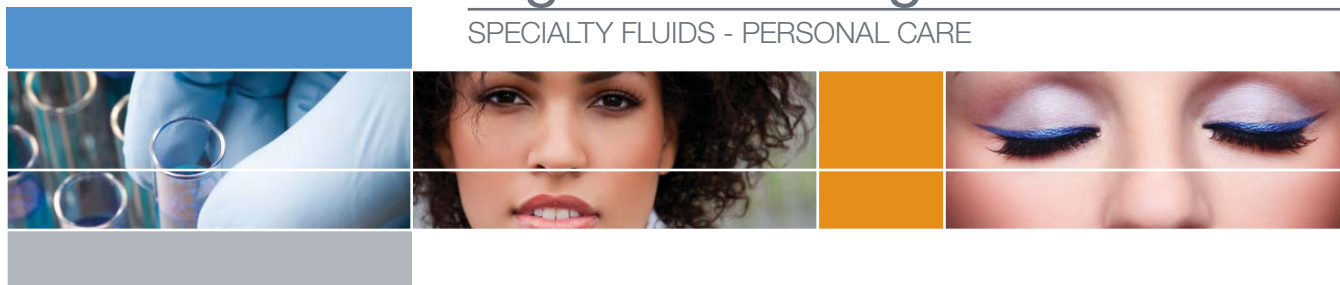


VELVESIL* 034 organosilicone gel

SPECIALTY FLUIDS - PERSONAL CARE



Velvesil 034 organosilicone gel is an excellent candidate to help disperse and spread cosmetic ingredients without tackiness. For example, it can help spread inorganic pigments, typically delivering brighter and more uniform color in make-up formulations. It can help provide more uniform coverage in daily sunscreens. Velvesil 034 organosilicone gel is a patented and unique silicone crosspolymer network that can deliver an outstanding sensorial benefit in most types of make-up, skin and color formulations. It has excellent compatibility with many organic materials enhancing the sensory benefit and stability of a wide range of personal care products.

Key Features and Typical Benefits

- enhances dispersion and spreading of inorganic pigments, physical & chemical filters and other organic actives
- excellent compatibility with most cosmetic ingredients
- detackification
- delivers a unique sensory experience in most types of cosmetics

Potential Applications

- *Skin Care*: lotions, creams, masks, anti-aging products
- *Sun Care*: lotions, creams, sunless tanners, sprayable products
- *Color Cosmetics*: foundations, concealers, mascaras, lipsticks, eyeshadow mousses
- *Hair Care*: conditioners, combing creams, masks and styling products

Typical Physical Properties

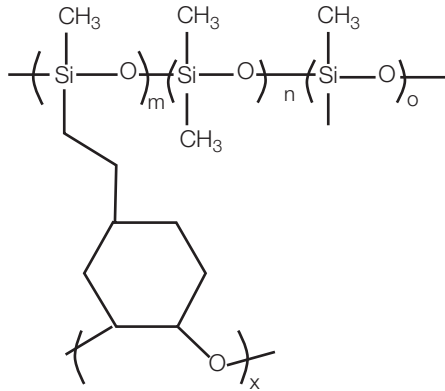
Solids Level, %	15 - 17
Appearance	Clear/translucent gel
Viscosity, cPs	> 80,000
Freeze Thaw Stable	No

INCI name: *Caprylyl Methicone (and) C30-45 Alkyl Cetearyl Dimethicone Crosspolymer.*

VELVESIL* 034 organosilicone gel

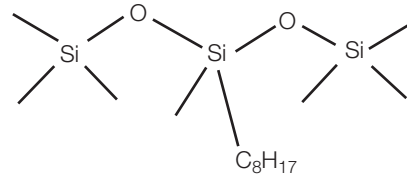
Chemical Structure

Velvesil 034 organosilicone gel is composed of a silicone crosspolymer gel and caprylyl methicone. Velvesil 034 organosilicone gel is highly compatible with most personal care ingredients.



Velvesil organosilicone gel

- Delightful sensory
- Dispersant for particulates



Silsoft* 034 organosilicone fluid

- Wetting aid
- Spreading aid
- Compatibilizer

VELVESIL * 034 organosilicone gel

Test Performance Data

Compatibility

Velvessil 034 organosilicone gel was blended in a Flack-Tek mixer in a 50:50 weight ratio with a wide variety of personal care ingredients to determine its compatibility profile.

Material Type	Material Name/INCI name		Compatibility
Silicones	SF1202	Cyclopentasiloxane	Compatible
	Element14* PDMS 5	Dimethicone	Compatible
	Silsoft* 034 organosilicone fluid	Caprylyl Methicone	Compatible
	SS4230	Cyclopentasiloxane (and) Trimethylsiloxysilicate	Compatible
	SS4267	Dimethicone (and) Trimethylsiloxysilicate	Compatible
	SF1632	Cetearyl Methicone	Compatible
	SF1642	C30-45 Alkyl Dimethicone	Compatible
	SR1000	Trimethylsiloxysilicate	Compatible
	SilForm* flexible resin	Polymethylsilsesquioxane	Compatible
	SF96-200	Dimethicone	Compatible
	Silsoft 440 silicone	PEG-20/PPG-23 Dimethicone	Compatible
	Tospearl* 145 microspheres	Polymethylsilsesquioxane	Compatible
	Silsoft ETS trisiloxane	Ethyl Trisiloxane	Compatible
Waxes	Beeswax	Beeswax	Compatible
	Carnauba Wax	Copernica Cerifera (Carnauba) Wax	Compatible
	Candelilla Wax	Euphorbia Cerifera (Candelilla) Wax	Compatible
	Microease™ 116 Microcrystalline Wax	Oxidized Synthetic Wax	Compatible
Butters	Murumuru Butter	Astrocaryum Murumuru Butter	Partially compatible
	Cupuacu Butter	Theobroma Grandiflorum Seed Butter	Incompatible
Hydrocarbons & Vegetable oils	Mineral Oil	Mineral Oil	Compatible
	Petrolatum	Petrolatum	Partially compatible
	Jojoba Oil	Simmondsia Chinensis (Jojoba) Seed Oil	Partially compatible
	Andiroba Oil	Carapa Guaianensis Seed Oil	Compatible
	Sunflower Oil	Helianthus Annuus (Sunflower) Seed Oil	Compatible
Esters	Isopropyl Myristate	Isopropyl Myristate	Compatible
	C12-15 Alkylbenzoate	C12-15 Alkylbenzoate	Compatible
	Caprylic/Capric Triglyceride	Caprylic/Capric Triglyceride	Compatible
Sunscreens	Octylsalicylate	Octylsalicylate	Compatible
	Octocrylene	Octocrylene	Partially compatible
	Ethylhexylmethoxycinnamate	Ethylhexylmethoxycinnamate	Partially compatible
Alcohols & Glycols	Glycerin	Glycerin	Partially compatible
	Propylene glycol	Propylene Glycol	Partially compatible
	Butylene Glycol	Butylene Glycol	Partially compatible
	Ethanol	Ethanol	Partially compatible
Others	Safflower Oleosomes	Carthamus Tinctorius (Safflower) Oleosomes	Partially compatible

Compatible = Readily dispersed into test materials.

Partially Compatible = Partially dispersed into test material.

Incompatible = Does not disperse into test material.

Microease is a trademark of Presperse LLC.

Note: Test data. Actual results may vary.

Velvessil 034 organosilicone gel is highly compatible with a wide range of personal care raw materials, including highly polar organics. This property allows flexibility in the selection of personal care ingredients to be used within a formulation.

VELVESIL * 034 organosilicone gel

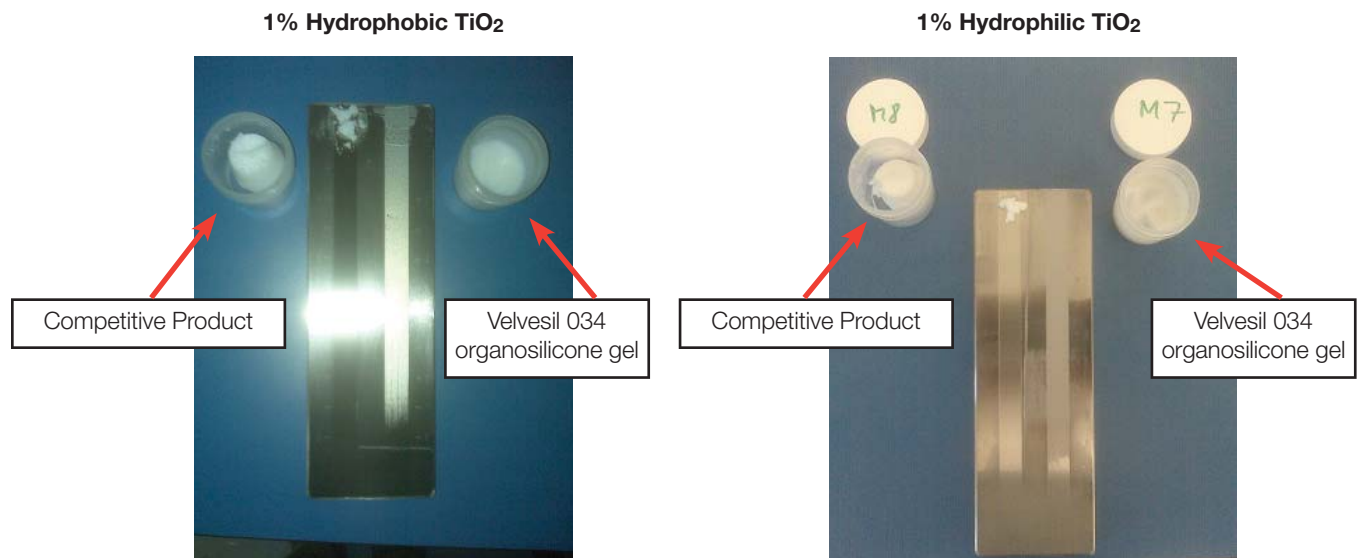
Test Performance Data (continued)

Pigment Dispersion

The majority of pigments that are used in personal care formulations are hydrophobic pigments that have been pre-treated for use in the oil phase.

Each test formulation contained 99% silicone gel and 1% hydrophobically coated TiO_2 blended by a Flack-Tek mixer at 1800 rpm for 1 minute. Velvessil 034 organosilicone gel quickly dispersed the hydrophobic pigment into a smooth, spreadable mixture.

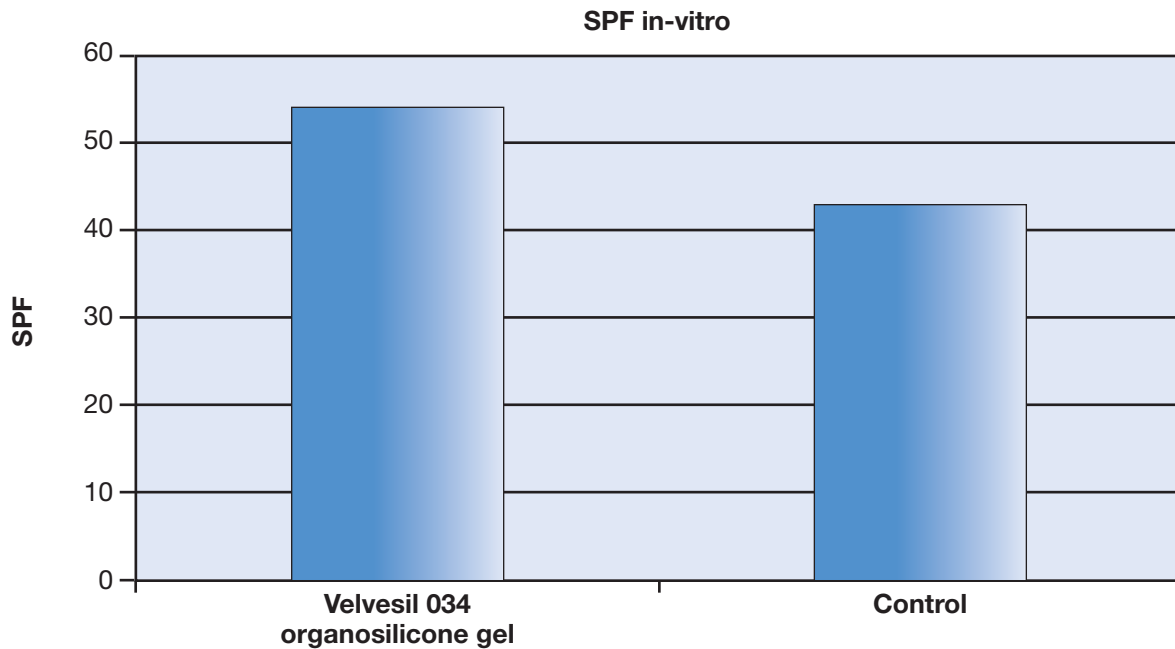
Here, the Hegman test refers to the fineness of the dispersion of the pigment: the higher the number the greater the degree of dispersion. With hydrophobically coated TiO_2 , Velvessil 034 organosilicone gel achieved number 7, while the standard silicone gel result was 0. Similar results are obtained with the uncoated hydrophilic TiO_2 .



Note: Test results. Actual results may vary.

VELVESIL* 034 organosilicone gel

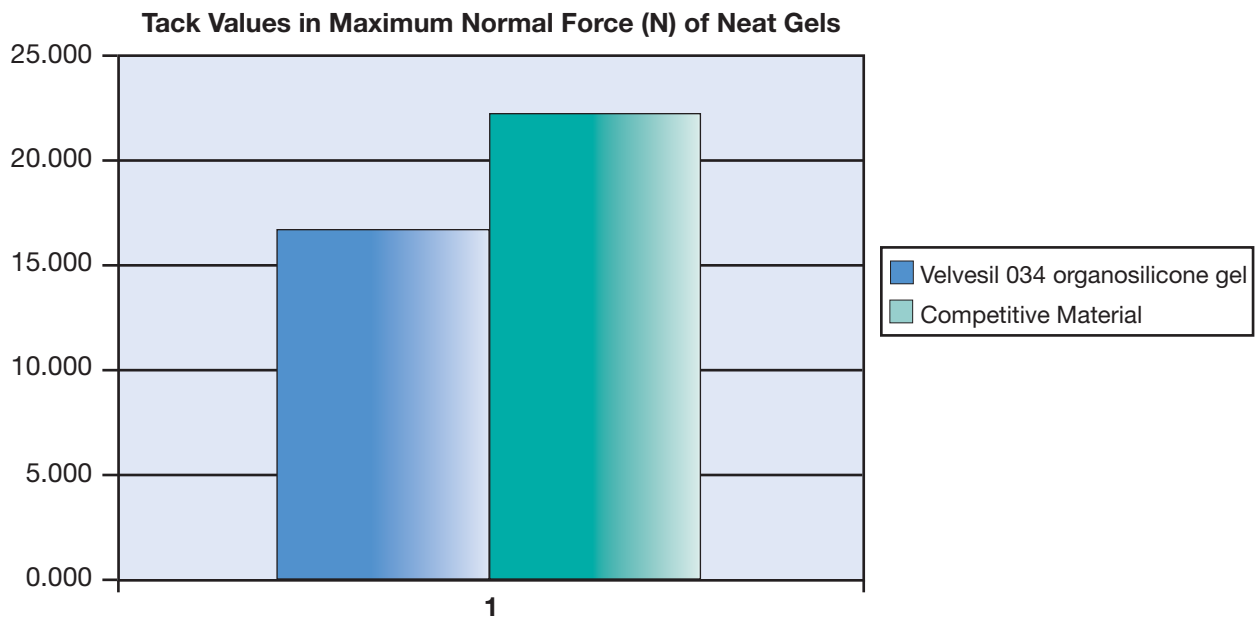
Test Performance Data (continued)



The O/W emulsion that contained organic filters presented higher SPF with Velvesil 034 organosilicone gel in comparison with the control. The use of 3% Velvesil 034 organosilicone gel and 7% SS4267 led to a 25% increase in SPF, when compared with the same control formulation that contained 3% Element14* PDMS 5 and 7% SS4267. The SPF measurements were conducted via the Vitro-Skin method.

Detackification

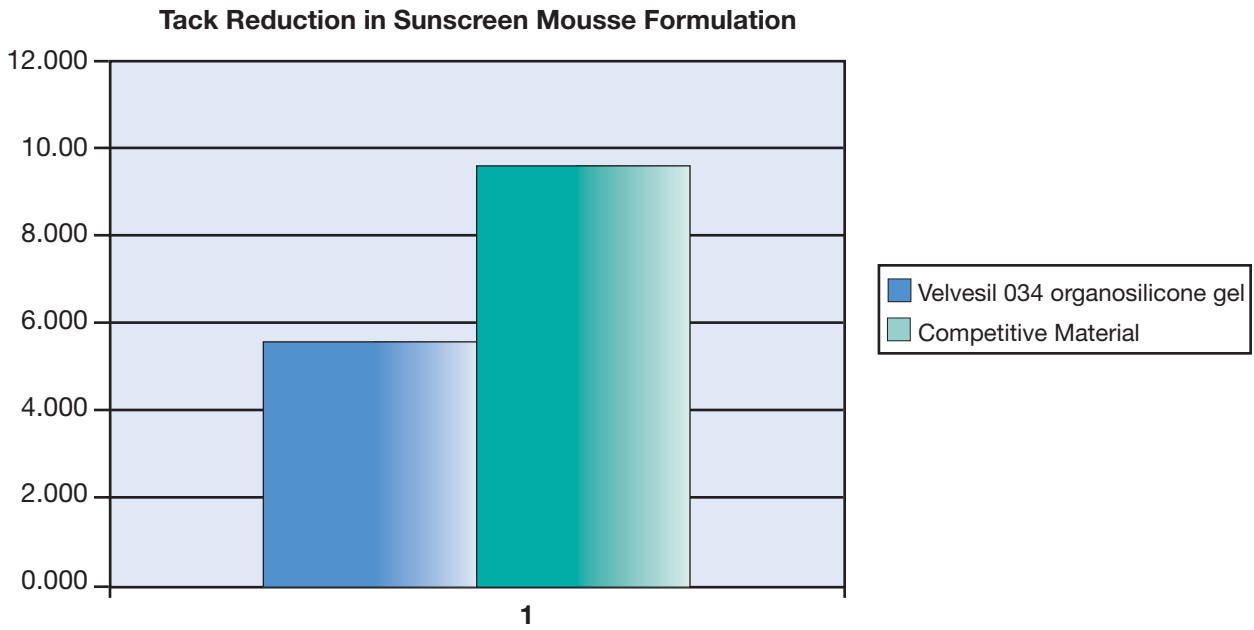
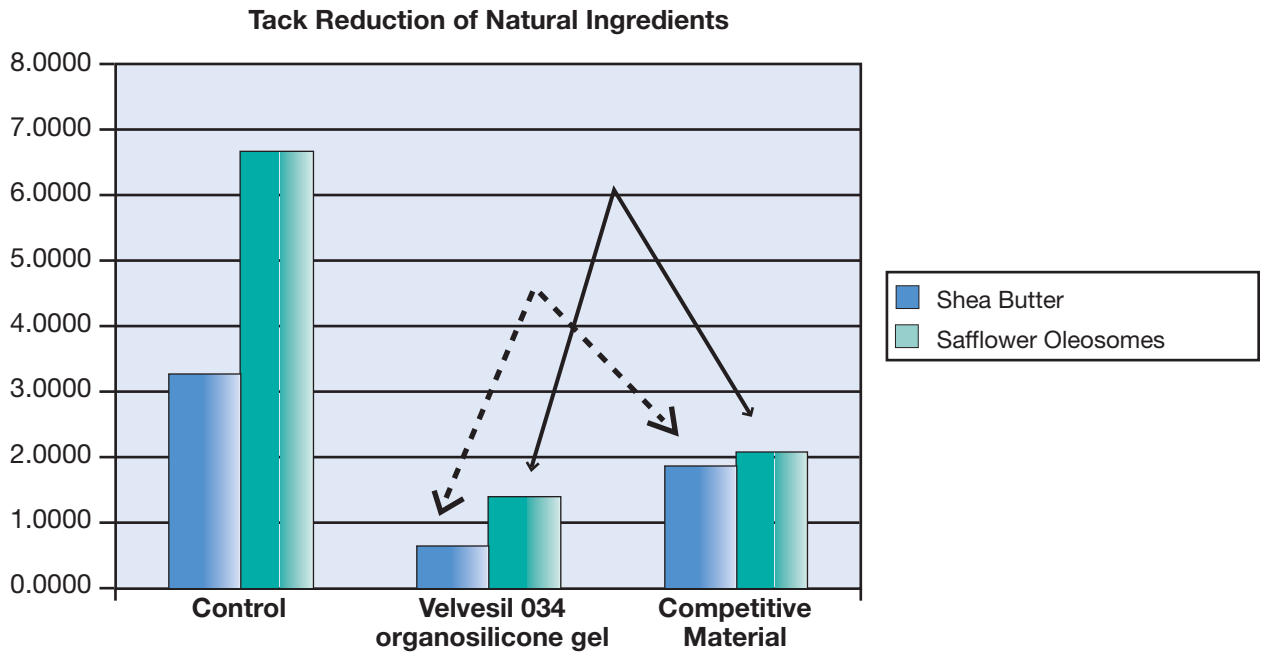
Tack results were obtained using a rheometer. The products were applied to the fixed bottom plate. The upper plate was then lowered to achieve a specified gap width. Pre-shear was applied and then the maximum Normal Force required to lift the upper plate was determined. A lower normal force can be correlated with lower levels of tack.



Note: Test data. Actual results may vary.

VELVESIL * 034 organosilicone gel

Test Performance Data (continued)



Velvesil 034 organosilicone gel was less tacky than the competitive gel, and reduced the tack of some natural ingredients and sunscreen formulations.

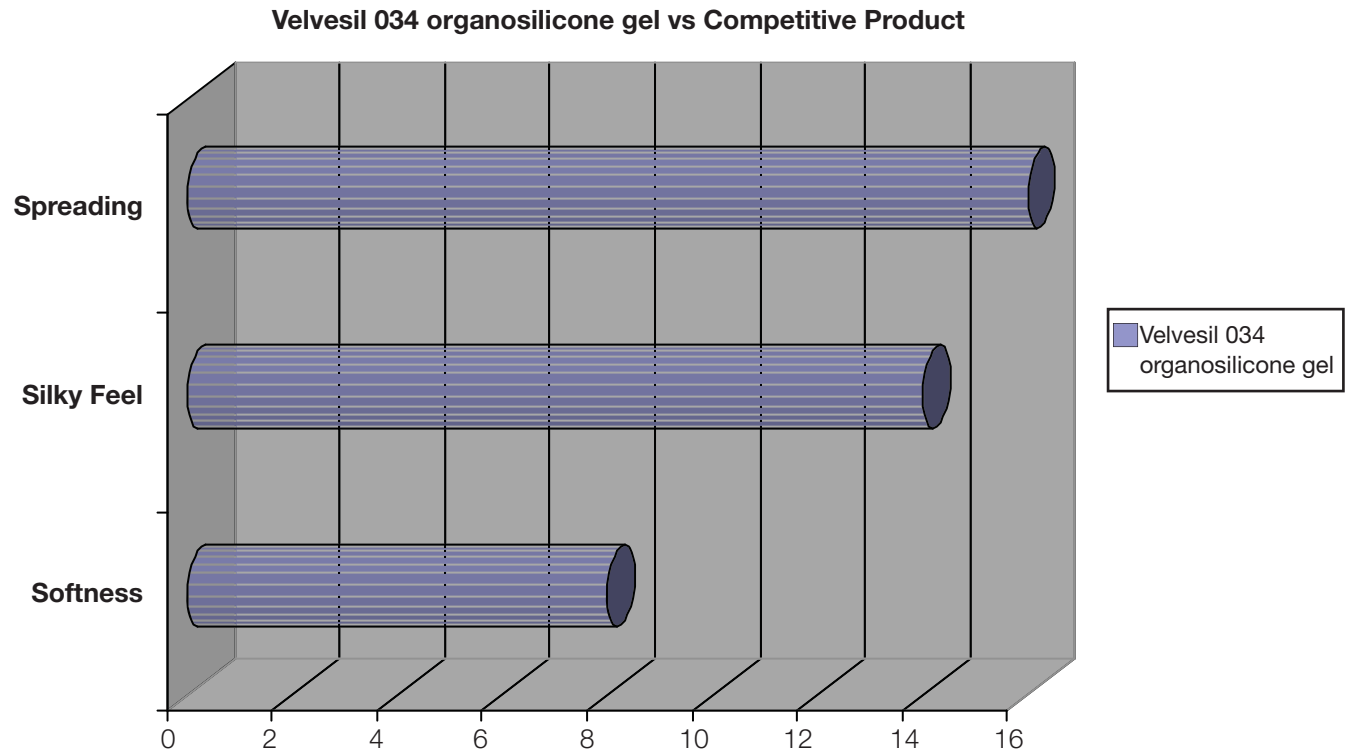
Note: Test data. Actual results may vary.

VELVESIL* 034 organosilicone gel

Test Performance Data (continued)

Sensory Panel

A sensory panel was conducted comparing the performance of Velvesil 034 organosilicone gel relative to Dimethicone (and) Dimethicone Crosspolymer. The Dimethicone (and) Dimethicone Crosspolymer was assigned 0's for the attributes evaluated.



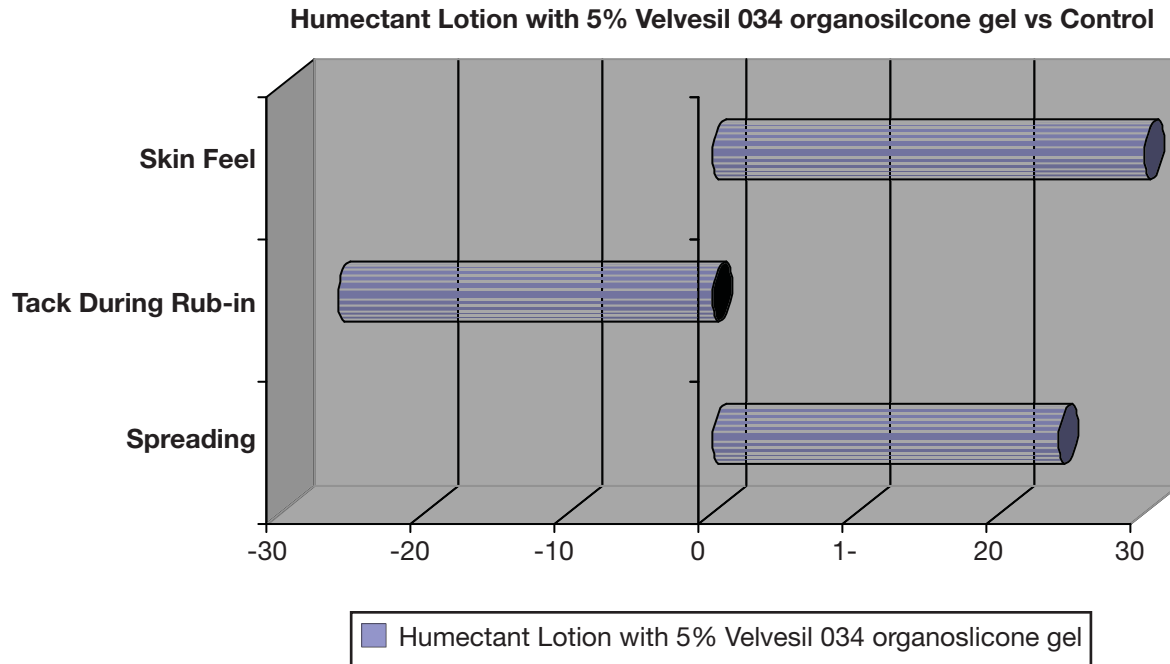
Velvesil 034 organosilicone gel scored higher than the competitive product for the attributes of spreading, silky feel and softness.

Note: Test data. Actual results may vary.

VELVESIL* 034 organosilicone gel

Test Performance Data (continued)

A second sensory panel was conducted comparing the performance of humectant lotion containing 4 tacky natural organic oils plus with Velvessil 034 organosilicone gel relative to the same control formulation without silicone gel. The control formulation was assigned 0's for the attributes evaluated.



Note: Test data. Actual results may vary.

During the rub-in phase, the formulation containing Velvessil 034 organosilicone gel performed better in the attributes of tack and spreading. Nine out of ten panelists preferred the skin feel delivered from the formulation containing the Velvessil 034 organosilicone gel.

Formulation Guidelines

Velvessil 034 organosilicone gel typically is easy to incorporate into formulations and is compatible with the most commonly used cosmetic ingredients. Gently work the Velvessil 034 organosilicone gel into the oil phase of the formula and mix thoroughly.

Recommended Starting Use Levels:	Emulsions:	3-25%
	Anhydrous Gels:	25-90%
	Cleaning Products:	1-5%
	Shower Conditioners:	5-20%
	Hair care Products:	1-5%

Product formulations are included as illustrative examples only. Momentive makes no representation or warranty of any kind with respect to any such formulations, including, without limitation, concerning the efficacy or safety of any product manufactured using such formulations.

VELVESIL * 034 organosilicone gel

Sample Formulations

Anti-aging Cream

Parts	Ingredients	INCI name	Wt (%)
A	DI Water	Water	68.87
	Glycerin	Glycerin	4.00
	Edeta [®] BX Pulver	EDTA	0.05
	Actiphyte [®] of Cucumber	Butylene Glycol & Water & Cucumis Sativus & Fruit Extract	2.00
	Purac[®] Powder 60	Lactic Acid	1.00
B	Velvesil 034 organosilicone gel	Caprylyl Methicone (and) C30-45 Alkyl Cetearyl Dimethicone Crosspolymer	5.00
	Tospearl [®] 2000A microspheres	Polymethylsilsequioxane	2.00
	SF1202	Cyclopentasiloxane	10.00
	SF1540	Cyclopentasiloxane & PEG/PPG 20/15 Dimethicone	3.00
	AC Soluble Collagen	Soluble Collagen	1.00
	Crodamol [™] CAP	Cetearyl Ethylhexanoate & Isopropyl Myristate	3.00
	Glydant Plus [®] Liquid	DMDM Hydantoin & Iodopropynyl Butylcarbamate	0.08

Procedure: At room temperature, slowly add Part A to Part B with good mixing. Increase agitation as mixture thickens. Continue mixing for 20 minutes.

Actiphyte is a registered trademark of Active Organics Inc.

Crodamol is a trademark of Croda Inc.

Edeta is a registered trademark of BASF Corporation.

Glydant Plus is a registered trademark of Lonza Inc.

Purac is a registered trademark of Purac Biochem B.V.

Enhanced Sunscreen Mousse

Ingredient	INCI	Wt %
Velvesil 034 organosilicone gel	Caprylyl Methicone (and) C30-45 Alkyl Cetearyl Dimethicone Crosspolymer	51.00
Silsoft [®] 034 organosilicone fluid	Caprylyl Methicone	25.00
Element14 [®] PDMS 5	Dimethicone	7.00
SR 1000	Trimethylsiloxysilicate	2.00
TiO ₂	Titanium Dioxide & Aluminum Stearate	15.00

Procedure: Mix at room temperature with modest agitation.

Product formulations are included as illustrative examples only. Momentive makes no representation or warranty of any kind with respect to any such formulations, including, without limitation, concerning the efficacy or safety of any product manufactured using such formulations.

VELVESIL* 034 organosilicone gel

Sample Formulations (continued)

Spreading Lipstick

Parts	Ingredients	INCI name	Wt (%)
A	SilForm* flexible resin	Polymethylsilsesquioxane	0.4
	SF1202	Cyclopentasiloxane	14.7
B	Miglyol® 812	Caprylic/Capric Triglyceride	15.0
	Velvessil 034 organosilicone gel	Caprylyl Methicone (and) C30-45 Alkyl Cetearyl Dimethicone Crosspolymer	2.0
	Cropure® Olive	Olea Europaea (Olive) Fruit Oil	20.2
	Isopropyl Myristate	Isopropyl Myristate	5.0
	Mineral Oil	Mineral Oil	2.5
	Cacao Butter	Theobroma Cacao (Cocoa) Seed Butter	1.0
	Beeswax	Beeswax	12.0
	Lanolin	Lanolin	4.3
	Carnauba Wax	Copernica Cerifera (Carnauba) Wax	7.0
	Mica M*	Mica	10.3
	Pigment Mixture	Pigment Mixture	5.6

Procedure:

1. Dissolve the SilForm flexible resin in SF 1202 at 50°C. *NOTE:* Use suitable equipment when handling ingredients above flash point!
2. Mix ingredients of phase B at 85°C and mix until homogeneous. *NOTE:* Use suitable equipment when handling ingredients above flash point!
3. Add phase A to B.
4. Homogenize.
5. Add preservative and fragrance as needed.
6. Pour into suitable containers. Cool down to room temperature.

Miglyol is a registered trademark of Sasol GmbH.

Cropure is a registered trademark of Croda Inc.

Mica M is a registered trademark of AMANDUS KAHL GmbH & Co. KG.

Velvety Liquid Foundation

Parts	Ingredients	INCI name	Wt (%)
A	SF1202	Cyclopentasiloxane	15.0
	Tospearl* 2000 B microspheres	Polymethylsilsesquioxane	5.0
	Silsoft* 74 silicone	Trimethylsiloxysilicate (and) Isododecane	5.0
	Velvessil 034 organosilicone fluid	Caprylyl Methicone (and) C30-45 Alkyl Cetearyl Dimethicone Crosspolymer	2.0
	SF1540	Cyclopentasiloxane (and) PEG/PPG -20/15 dimethicone	5.0
	Pigments	Iron Oxide	6.0
B	Water	Aqua	54.5
	Glycerin	Glycerin	3.0
	1,2-Propandiol	Propylene Glycol	2.0
	SF1188A	PEG/PPG-20/15 Dimethicone	1.5
	Sodium Chloride	Sodium Chloride	1.0

Procedure:

1. Mix all ingredients of phase A in order given. Homogenize.
2. Mix all ingredients of phase B.
3. Slowly add phase B to A while mixing well.
4. Add preservative and fragrance as needed.

Product formulations are included as illustrative examples only. Momentive makes no representation or warranty of any kind with respect to any such formulations, including, without limitation, concerning the efficacy or safety of any product manufactured using such formulations.

*Velvessil, Silsoft, SilForm and Tospearl are trademarks of Momentive Performance Materials Inc.

VELVESIL * 034 organosilicone gel

Patent Status

Technical subject matter in this publication is described and protected by one or more of the following U.S. Patents and their foreign counterpart patents and/or patent applications: U.S. Patent Nos. 7,411,007; 7,388,049; 7,387,784; 7,381,769; 7,241,835; 6,759,479; 6,538,061; 6,531,540 and 6,444,745. Other U.S. and foreign patents and/or patent applications not listed covering the subject matter may be relevant.

Product Safety, Handling and Storage

Customers considering the use of this product should review the latest Material Safety Data Sheet and label for product safety information, handling instructions, personal protective equipment if necessary, and any special storage conditions required. Material Safety Data Sheets are available at www.momentive.com or, upon request, from any Momentive Performance Materials representative. Use of other materials in conjunction with Momentive Performance Materials products may require additional precautions. Please review and follow the safety information provided by the manufacturer of such other materials.

Limitations

Customers must evaluate Momentive Performance Materials products and make their own determination as to fitness of use in their particular applications.

Emergency Service

Momentive Performance Materials maintains an around-the-clock emergency service for its products. The American Chemistry Council (CHEMTREC) and CareChem24 International also maintain an around-the-clock emergency service for all chemical products:

<u>Location</u>	<u>Momentive Performance Materials Products</u>	<u>All Chemical Products</u>
Mainland U.S., Puerto Rico	518.233.2500	CHEMTREC: 800.424.9300
Alaska, Hawaii	518.233.2500	CHEMTREC: 800.424.9300
Canada	518.233.2500	CHEMTREC: 800.424.9300
Europe	+518.233.2500 (Albanian, Czech, Danish, Dutch, English, Finnish, French, German, Greek, Hungarian, Italian, Lithuanian, Norwegian, Polish, Portuguese, Romanian, Russian, Serbo-Croatian, Slovak, Spanish, Swedish, Turkish, Ukrainian)	+44.(0)208.762.8322 (UK)
Middle East, All countries, except Israel	+518.233.2500	+961.3.487.287 (Lebanon)
Middle East, Israel	+518.233.2500	+44.(0)208.762.8322 (UK)
Latin America, Asia/Pacific, all other locations worldwide	+518.233.2500	CHEMTREC: +1-703.527.3887 (collect)
At sea	Radio U.S. Coast Guard, which can directly contact Momentive Performance Materials at 518.233.2500 or CHEMTREC at 800.424.9300.	

DO NOT WAIT. Phone if in doubt. You will be referred to a specialist for advice.

CUSTOMER SERVICE CENTERS

North America	E cs-na.silicones@momentive.com		
	• Specialty Fluids	T +1.800.523.5862	F +1.304.746.1654
	• UA, Silanes and Specialty Coatings	T +1.800.334.4674	F +1.304.746.1623
	• RTVs and Elastomers	T +1.800.332.3390	F +1.304.746.1623
	• Consumer Sealants & Construction Sealants and Adhesives	T +1.877.943.7325	F +1.304.746.1654
Latin America	E cs-la.silicones@momentive.com		
	• Argentina & Chile	T +54.11.4862.9544	F +54.11.4862.9544
	• Brazil	T +55.11.4534.9650	F +55.11.4534.9660
	• Mexico & Central America	T +52.55.2169.7670	F +52.55.2169.7699
	• Venezuela, Ecuador, Peru, Colombia & Caribbean	T +58.212.285.2149	F +58.212.285.2149
Europe, Middle East, Africa and India	E cs-eur.silicones@momentive.com	T +00.800.4321.1000	
		T +40.21.3111848	
Pacific	E cs-ap.silicones@momentive.com		
	• China	T +1.800.820.0202 or T +86.21.3860.4892	F +86.21.5079.3725
	• Japan	T +0120.975.400 or T +81.276.20.6182	F +81.276.31.6259
	• Korea	T +82.2.6201.4600	F +82.2.6201.4601
	• Malaysia	T +60.3.9206.1532	F +60.3.9206.1533
	• Thailand	T +662.207.3456	F +66.2207.3488
Worldwide Hotline		T +1.607.786.8131	F +1.607.786.8309
		T +1.800.295.2392	

Visit us at Momentive.com



Momentive Performance Materials
22 Corporate Woods Boulevard
Albany, NY 12211

*Velvet, Silsoft, SilForm, Tospearl and Element14 are trademarks of Momentive Performance Materials Inc.
Momentive is a trademark of Momentive Performance Materials Holdings LLC.
Copyright 2010-2011 Momentive Performance Materials Inc. All rights reserved.

MOM-131-137-10E-GL 02/11 Printed in U.S.A.

THE MATERIALS, PRODUCTS AND SERVICES OF MOMENTIVE PERFORMANCE MATERIALS INC., MOMENTIVE PERFORMANCE MATERIALS USA INC., MOMENTIVE PERFORMANCE MATERIALS ASIA PACIFIC PTE. LTD., MOMENTIVE PERFORMANCE MATERIALS WORLDWIDE INC., MOMENTIVE PERFORMANCE MATERIALS GmbH, THEIR SUBSIDIARIES AND AFFILIATES DOING BUSINESS IN LOCAL JURISDICTIONS (collectively "SUPPLIERS"), ARE SOLD BY THE RESPECTIVE LEGAL ENTITY OF THE SUPPLIER SUBJECT TO SUPPLIERS' STANDARD CONDITIONS OF SALE, WHICH ARE INCLUDED IN THE APPLICABLE DISTRIBUTOR OR OTHER SALES AGREEMENT, PRINTED ON THE BACK OF ORDER ACKNOWLEDGMENTS AND INVOICES, AND AVAILABLE UPON REQUEST. ALTHOUGH ANY INFORMATION, RECOMMENDATIONS, OR ADVICE CONTAINED HEREIN IS GIVEN IN GOOD FAITH, SUPPLIERS MAKE NO WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, (i) THAT THE RESULTS DESCRIBED HEREIN WILL BE OBTAINED UNDER END-USE CONDITIONS, OR (ii) AS TO THE EFFECTIVENESS OR SAFETY OF ANY DESIGN INCORPORATING SUPPLIERS' PRODUCTS, MATERIALS, SERVICES, RECOMMENDATIONS OR ADVICE. AFOREMENTIONED EXCLUSIONS OR LIMITATION OF LIABILITY ARE NOT APPLICABLE TO THE EXTENT THAT THE END-USE CONDITIONS AND/OR INCORPORATION CONDITIONS CORRESPOND TO THE RECOMMENDED CONDITIONS OF USE AND/OR OF INCORPORATION AS DESCRIBED BY SUPPLIER IN ITS PRODUCT DATA SHEET AND/OR PRODUCT SPECIFICATIONS. EXCEPT AS PROVIDED IN SUPPLIERS' STANDARD CONDITIONS OF SALE, SUPPLIERS AND THEIR REPRESENTATIVES SHALL IN NO EVENT BE RESPONSIBLE FOR ANY LOSS RESULTING FROM ANY USE OF ITS MATERIALS, PRODUCTS OR SERVICES DESCRIBED HEREIN.

Each user bears full responsibility for making its own determination as to the suitability of Suppliers' materials, services, recommendations, or advice for its own particular use. Each user must identify and perform all tests and analyses necessary to assure that its finished parts incorporating Suppliers' products, materials, or services will be safe and suitable for use under end-use conditions. Nothing in this or any other document, nor any oral recommendation or advice, shall be deemed to alter, vary, supersede, or waive any provision of Suppliers' Standard Conditions of Sale or this Disclaimer, unless any such modification is specifically agreed to in a writing signed by Suppliers. No statement contained herein concerning a possible or suggested use of any material, product, service or design is intended, or should be construed, to grant any license under any patent or other intellectual property right of Suppliers or any of its subsidiaries or affiliates covering such use or design, or as a recommendation for the use of such material, product, service or design in the infringement of any patent or other intellectual property right.