

Dermol SLLC-L

INCI name: Sodium Lauroyl Lactylate

A Natural Ingredient in An Unnatural Form

- unique free flowing liquid
- colorless
- 100% solids concentrate
- cost effective
- derived from sodium salt of lauric acid
- natural surfactant and emulsifier
- biodegradeable
- globally compliant
- COSMOS approved



Alzo International Inc

Features:

- adds rich and long-lasting foam
- ideal for sulfate free and soap-free systems
- moisturizing skin feel
- broad ingredient compatibility
- skin penetration
- actives delivery
- alternative to petroleum based surfactants

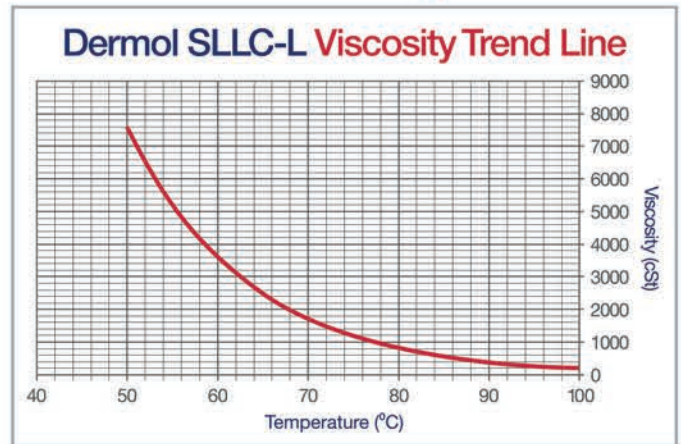
Applications:

- body washes
- cleansers
- shampoos
- liquid and bar soaps
- sun care
- facial cleansers
- shave creams
- foundations
- moisturizers
- fragrance sprays



Dermol SLLC-L is a thick viscous liquid and flowable at room temperature. The material exhibits a near Newtonian behavior and its viscosity drops by half with every 10°C rise in temperature. At 100°C, its viscosity is about 200 cst.

Dermol SLLC-L Viscosity



Comparison of Dermol SLLC-L with Sodium Lauroyl Lactylate Solid Appearance and Flow Characteristic

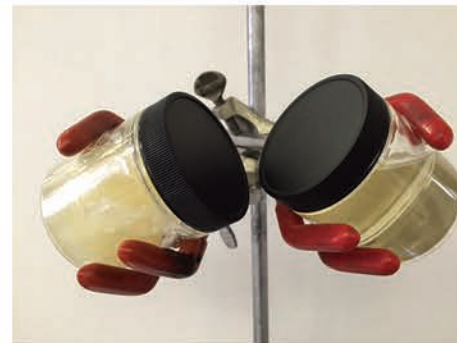
Sample temperature and description room temperature 25°C
The sample on the left is sodium lauroyl lactylate solid. The sample on the right is Dermol SLLC-L.



Appearance and flow characteristics
The material on the left is a solid at room temperature. The material on the right Dermol SLLC-L is pourable at room temperature.

Comparison of Dermol SLLC-L with Sodium Lauroyl Lactylate Solid Appearance and Flow Characteristic

Samples heated to 50°C.
The sample on the right Dermol SLLC-L is readily pourable (viscosity about 7,500 cst). The sample on the left sodium lauroyl lactylate solid is a soft gel (non-pourable).



Dermol SLLC-L at 50°C.

Dermol SLLC-L Appearance



Dermol SLLC-L is an easy to use liquid. It is a 100% actives concentrate. Dermol SLLC-L is clear and colorless.

Dermol SLLC-L Foam Enhancement

Body Wash with Dermol SLLC-L immediately after shaking.



Body Wash with Dermol SLLC-L 1 hour after shaking.

Dermol SLLC-L USP <51> Antimicrobial Effectiveness Test Validation

Dilution	E. coli TAMC % Recovery	P. aeruginosa TAMC % Recovery	S. aureus TAMC % Recovery	C. albicans TYMC % Recovery	A. brasiliensis TYMC % Recover	Specifications	Conforms
1:10	87	113	100	91	79	USP<151>	Yes

AET

Test Interval	E. coli TAMC (cfu/g)	P. aeruginosa TAMC (cfu/g)	S. aureus TAMC (cfu/g)	C. albicans TYMC	A. brasiliensis (cfu/g)	Specifications	Conforms
0 days	5.5x10 ⁵	2.3x10 ⁵	4.1x10 ⁵	3.7x10 ⁵	2.3x10 ⁵	USP<151>	N/A
14 days	<10	<10	<10	<10	<10	USP<151>	Yes
28 days	<10	<10	<10	<10	<10	USP<151>	Yes

Dermol SLLC-L Biodegradability

Sample	Label	Percent Degraded	Degradation Rate	Estimated Half-Life	Estimated Persistence	Destination
Reference	Benzoate	96%	0.0607	6 days	16 to 40 days	Readily biodegradeable
5098	Dermol SLLC-L	86%	0.0524	10 days	9 to 66 days	Readily biodegradeable

Dermol SLLC-L Typical Properties

appearance @ 25°C	clear viscous liquid
color, gardner, max	3
odor	characteristic
specific gravity @ 25°C pounds/gallons	8.5290
Ph of 10% solution in water @ 25°C	5 to 6.5
acid number mgr. KOH/gr	60 to 110
saponification number mgr. KOH/gr	260 to 320

Dermol SLLC-L RIPT Safety Testing

CRL Study Number	Test Material	Number of Subjects	Test Results
CRL43716-1	Dermol SLLC-L	50	Did not demonstrate a potential for eliciting dermal irritation or sensitization.
CRL43716-2	Dermol SLLC-L (10% dilution)	50	Did not demonstrate a potential for eliciting dermal irritation or sensitization.



Dermol SLLC-L Formulary

MD1-005 Anhydrous Makeup Remover*

Ingredient	INCI Name	W/W%
Phase A		
Cupl™ PIC	PPG-2 Isoceteth-20 Acetate	30.00
Dermol™ SLLC-L	Sodium Lauroyl Lactylate	15.00
Phase B		
Dermol™ 99	Isononyl Isononanoate	35.00
Dermol™ DGDIS	Polyglycerol-2 Diisostearate	10.00
Dermol™ 1818	Isostearyl Isostearate	10.00
Total		100.00

MD1-019 Cold Process Milky Lotion*

Ingredient	INCI Name	W/W%
Phase A		
Aqueous Phase		
DI Water	Water	78.70
Glycerin	Glycerin	3.00
Ketrol T	Xanthan Gum	.30
Phase B		
Oil Phase		
Beantree™	Methylheptyl Isostearate	5.00
Trivent™ OC-G	Tricaprylin	5.00
Tween 80	Polysorbate-80	2.50
Dermol™ SLLC-L	Sodium Lauroyl Lactylate	2.50
Dermol™ MBDD	Mango Butter Dimer Dilinoleyl Esters/ Dimer Dilinoleate Copolymer	1.00
Phase C		
Preservative		
PCCA Natapres		2.00
Total		100.00

MD1-024 Concealer Stick*

Ingredient	INCI Name	W/W%
Phase A		
Castor Oil	Ricinus Communis (Castor) Seed Oil	32.35
Dermol™ SLLC-L	Sodium Lauroyl Lactylate	11.00
Trivent™ Mango Butter	Mangifera Indica (Mango) Seed Butter	10.50
NF White Beeswax	Beeswax	8.25
NF Candellilla (Wax® 419P)	Euphorbia Cerifera (Candelilla) Wax	4.15
Carnauba Wax	Copernicia Cerifera (Carnauba) Wax	2.00
Dermowax™ BB	Behenyl Behenate	1.50
Beantree®	Methylheptyl Isostearate	5.00
Phase B		
Kobo Color Blend MD1-027	White INBP70U, Brown INBP75EBR Yellow INBP55CY	20.75
Phase C		
Kobo SP-10	Nylon-12	4.50
Total		100.00

MD1-017 ECO Friendly Shampoo*

Ingredient	INCI Name	W/W%
Phase A		
Surfactant Phase		
EcoSense™ 3000	Decyl Glucoside	18.00
Plantaren® 1200 N UP	Lauroyl Glucoside	6.00
Dermol™ SLLC-L	Sodium Lauroyl Lactylate	4.00
Phase B		
Aqueous Phase		
Glycerine 99.7%	Glycerine	4.00
DI Water	Water	61.00
Dermol™ L-45	Glycereth-5 Lactate	2.00
Phase C		
Preservative		
TroyCare™ BD55	DMDM Hydantoin	.50
Phase D		
Thickener		
Dermothix™ 75 Liquid	Disteareth-75 IPDI (and) Glycereth-7 Caprylate/Caprata (and) Water	4.50
Total		100.00

MD1-016 Moisture Lock Lotion*

Ingredient	INCI Name	W/W%
Phase A		
Aqueous Phase		
DI Water	Water	71.00
Glycerin	Glycerin	3.00
Ketrol T	Xanthan Gum	.50
Sodium Hydroxide (50%)	Sodium Hydroxide	.50
Phase B		
Oil Phase		
Mango Butter	Mangifera Indica (Mango) Seed Butter	5.00
Beantree™	Methylheptyl Isostearate	5.00
Trivent™ OC-G	Tricaprylin	5.00
Dermowax™ GMS	Glyceryl Stearate	2.50
Dermol™ SLLC-L	Sodium Lauroyl Lactylate	2.50
Dermol™ MBDD	Mango Butter Dimer Dilinoleyl Esters/Dimer Dilinoleate Copolymer	1.00
Muls™ 2218	Behenoyl Stearic Acid	2.00
Phase C		
Preservative		
PCCA Natapres		2.00
Total		100.00

*Manufacturing procedures available upon request.



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Alzo International Inc

Where Chemistry is Artistry

650 Jernee Mill Road, Sayreville, New Jersey 08872 USA ■ Phone: (732) 254-1901 ■ Fax: (732) 254-4423
E-Mail: info@alzousa.com ■ Website: www.alzointernational.com