



## Technical Data Sheet

### **DOWSIL™ EP-9289 LL Cosmetic Powder**

INCI NAME: Dimethicone/Vinyl Dimethicone Crosspolymer (and) Lauroyl Lysine

#### **Features & Benefits**

- Elastomeric silicone powder variant
- Provides smoothness and a creamy skin feel
- Improves compaction
- High sebum absorption
- Allows innovative texture such as chocolate custard formulation
- Improves color intensity in lipstick

#### **Composition**

- Silicone elastomer powder combined with lauroyl lysine

#### **Applications**

- Color cosmetic: loose-, pressed- powders (eye shadow, make-up)
- Color cosmetic: liquid and stick foundations
- Face and body creams, lotions and gels
- Many other potential applications (example: lipsticks, blush, eye concealer)

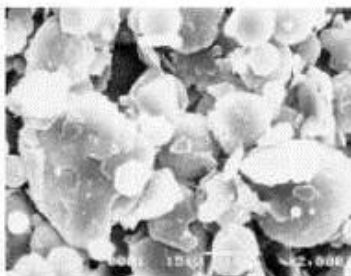
#### **Typical Properties**

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

Property	Result
Appearance	White–Pale Yellow
Bulk Density	0.2–0.4

#### **Description**

DOWSIL™ EP-9289 LL Cosmetic Powder is a white cross-linked dimethyl polysiloxane elastomer powder combined with lauroyl lysine.



**Figure 1:** M.E.M. picture of DOWSIL EP-9289 LL Cosmetic Powder.

**How to Use**

The unique combination with Lauroyl Lysine enables the powder to flow freely without agglomeration, thus providing superior handling ease.

DOWSIL™ EP-9289 LL Cosmetic Powder can be added directly to the oil phase ingredients without premixing in another fluid.

For powdery type formulations, DOWSIL™ EP-9289 LL Cosmetic Powder can be ground directly with the other powders.

**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.

WARNING: DOWSIL™ EP-9289 LL Cosmetic Powder is a fine powder and needs to be handled with certain precautions. Avoid dust accumulation. Eliminate sources of ignition. Product can build up static electricity which may be discharged as a spark. If this product is added to a solvent, precautionary measures need to be taken to eliminate sparks.

**Usable Life and  
Storage**

When stored at or below 32°C (90°F) in the original unopened containers, this product has a usable life of 27 months from the date of production.

**Packaging  
Information**

This product is available in 10 kg bags.

Samples of 200 g are available in carton boxes.

**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](http://consumer.dow.com) or consult your local Dow representative.

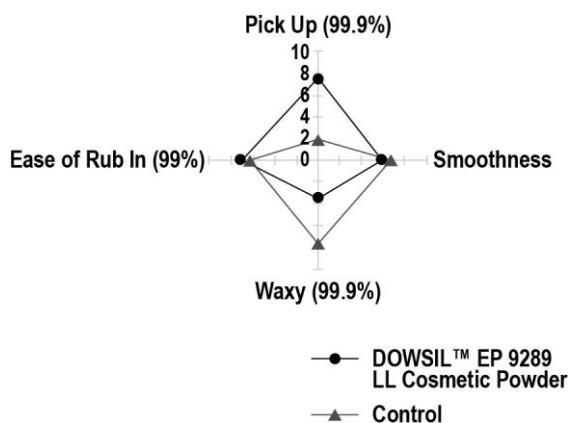
**Table 1:** Pressed powder formulation CPF 1104.

Ingredients	#Lot	Formulations	
		Compact powder	
		Control	1
	INCI name	%	%
<b>Phase A</b>			
DOWSIL™ EP-9289 LL Cosmetic Powder	Dimethicone/Vinyl Dimethicone Crosspolymer (and) Lauroyl Lysine		5.00
Barium Sulfate HL	Barium Sulfate	6.00	6.00
Zinc Stearate	Zinc Stearate	0.20	0.20
Talc Luzenac Pharma M	Talc	67.60	62.60
Magnesium Hydroxide Carbonate Heavy	Magnesium Hydroxide Carbonate	1.20	1.20
Unipure White LC 981	Titanium Dioxide	1.80	1.80
Propylparaben	Propylparaben	0.20	0.20
<b>Phase B</b>			
Unipure Brown LC 887	Iron Oxides	15.00	15.00
<b>Phase C</b>			
MOD	Octyldodecyl Myristate	2.00	2.00

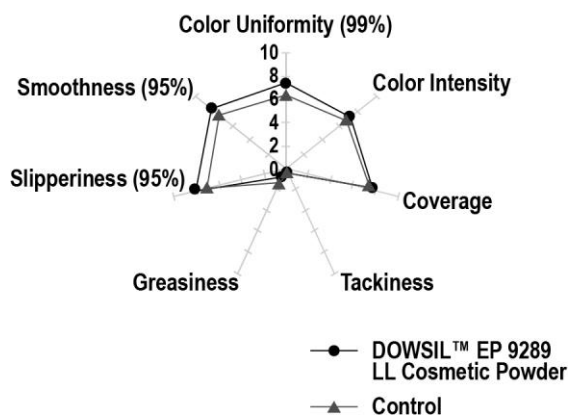
**Procedure**

1. Mix phase A ingredients together with a coffee grinder.
2. Add phase B ingredients to phase A and mix with a coffee grinder.
3. Mix phase C ingredients together and add them to the mixture (A/B), mixing well with the coffee grinder until homogeneous.
4. The formulation can then be compacted at 1 ton for 15 seconds.

**Evaluation in the Packaging**



**Evaluation After Rubbing Onto the Skin**



**A) Figure 1 & 2:** Multiple parameters paired comparison of pressed powder (CPF 1104) vs. the control.

**B) Table 2:** Results of compaction test for pressed powder CPF 1104.

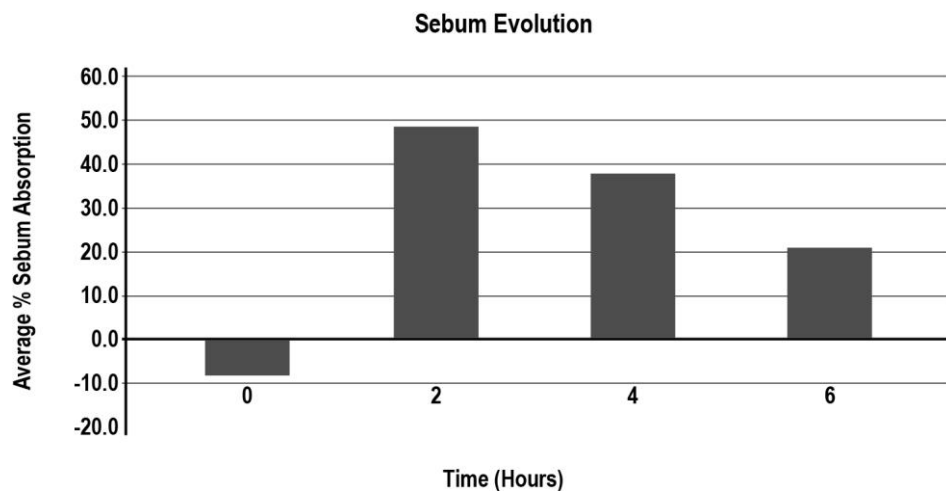
Powders	Drop test after compaction of neat powder: Weight loss (%)	Drop test after compaction of pressed powder (CPF 1104): Weight loss (%)
DOWSIL™ EP-9289 LL Cosmetic Powder	0.84	0.51

**Procedure**

1. Fill the metal mold with the powder & apply 1 ton during 15 seconds.
2. If the pressed powder is successfully compacted, proceed to the drop test: 3 times from a 30 cm height.
3. Record the weight before and after the drop test.
4. A weight loss percentage lower than 10% qualifies a good compacting agent.

**Table 3:** Absorption properties of DOWSIL™ EP-9289 LL Cosmetic Powder.

Ingredients	Absorption result (g fluid/1 g powder)
<b>Esters</b>	
Octyl Pal	0.60
Isopropyl Myristate	0.90
<b>Oils</b>	
Mineral Oil	0.70
Castor Oil	0.60
Sunflower Oil	0.60
<b>Synthetic Oils</b>	
Isododecane	1.40
<b>Silicones</b>	
DOWSIL™ 5562 Carbinol Fluid	0.60
XIAMETER™ PMX-0245 Cyclopentasiloxane	1.60
<b>Solvents</b>	
Water	0.00
Ethanol	0.50



**Figure 3:** Absorption of sebum of a hydrogel containing 2% DOWSIL™ EP-9289 LL Cosmetic Powder. Sebumeter SM 810, Courage & Khazaka

**Table 4:** Chocolate Custard formulation (CPF 1110).

Ingredient	Wt. %	Trade Name/Supplier	
<b>Phase A</b>			
1	CI 77891 Dimethicone	0.528	SAT-T-47051 / US Cosmetics Corp.
2	CI 77491 Dimethicone	0.456	SAT-R-33128 / US Cosmetics Corp.
3	CI 77492 Dimethicone	0.732	SAT-Y-338073 / US Cosmetics Corp.
4	CI 77499 Dimethicone	0.284	SAT-B-33134 / US Cosmetics Corp.
<b>Phase B</b>			
5	Dimethicone/Vinyl Dimethicone Crosspolymer (and) Alumina	23	
6	Zinc Oxide (and ) Dimethicone	6	Z-Cote HP-1 / BASF Corporation
<b>Phase C</b>			
7	Distilled Water	4	
8	Water (and) Propylene Glycol (and) Helianthus Annuus (Sunflower) Seed Oil (and) Theobroma Cacao (Cocoa) Extract (and) Sclerotium Gum	1	Cocoa Phytolait / Alban Muller International
9	Dimethicone	22.75	XIAMETER™ PMX-200 Fluid 5 cSt
10	Cyclopentasiloxane	22.75	XIAMETER™ PMX-0245 Cyclopentasiloxane
11	Cyclopentasiloxane (and) Dimethiconol	5	XIAMETER™ PMX-1501 Fluid
12	Cyclopentasiloxane (and) Dimethicone Crosspolymer (and) Dimethicone/Vinyl Dimethicone Crosspolymer (and) Dimethiconol	5	DOWSIL™ 9546 Silicone Elastomer Blend
13	Theobroma Cacao (Cocoa) Seed Butter	1	Cocoa Butter / Alban Muller International
14	Cocos Nucifera (Coconut) Oil (and) Gardenia Tahitensis Flower Extract	1	Monoi de Tahiti Butter - Fragranced / Pacifique Sud Cosmetique
15	Tocopheryl Acetate	0.5	dl-alpha-Tocopheryl Acetate / DSM Nutritional Products
16	Polysilicone-15	5	Parsol-SLX / DSM Nutritional Products
<b>Phase D</b>			
17	Fragrance	1	Chocolat Creme 0310585 / Expressions Parfumees

## Procedure

1. Grind pigment powder.
2. Combine phase A and phase B in a covered vessel and mix with high speed dispersing action until all the powders are
3. uniform. For larger quantities, use nitrogen gas to make the head space of the mixer inert as a safety precaution.
4. To the main mixer vessel, add the ingredients of phase C and heat with mixing to 45°C, or until the Cocoa Butter is melted and the ingredients are uniform.
5. Add the combined phases A and B to the mixer in increments. Good scraping and high-speed dispersing action is recommended.
6. Add fragrance.

**Table 5 & 6:** Lipstick formulation and corresponding sensory evaluation of DOWSIL™ EP-9289 LL Cosmetic Powder.

Ingredients	INCI name	Control	1
		(%)	(%)
<b>Phase A</b>			
Unipure Red LC 304 AS	CI 15 850 and Triethoxycaprylsilane	6.40	6.40
Unipure Black LC 989 AS	CI 77499 and Triethoxycaprylsilane	0.80	0.80
XIAMETER™ PMX-0245 Cyclopentasiloxane	Cyclopentasilane	6.00	6.00
<b>Phase B</b>			
DOWSIL™ AMS-C30 Cosmetic Wax	C30-45 Alkyl Methicone and C30-45 Olefin	6.80	6.80
DOWSIL™ 2503 Cosmetic Wax	Stearyl Dimethicone	2.20	2.20
Covalip LL 48	Ozokerite and Euphorbia Cerifera (Candelila Wax) and Isostearyl Alcohol and Isopropyl Palmitate and Myristyl Lactate and Synthetic Beeswax and Copernicia Cerifera (carnaubawax) and Quaternium-18 Hectorite and Proplene Carbonate and Ethylene/VA Copolymer	11.50	11.50
Covasterol	Glyceryl Isostearate and Isostearyl Alcohol and Betasitosterol and Butyrospermum Parkii (Shea Butter) And Euphorbia Cerifera (Candelila Wax)	0.50	0.50
<b>Phase C</b>			
Covapearl Satin 931 AS	Mica and CI 77891 and Triethoxycaprylyl silane	10.00	10.00
Covaf fluid FS	Sodium Stearyl Fumarate	1.00	1.00
<b>Phase D</b>			
DOWSIL™ FA 4001 CM Silicone Acrylate	Cyclopentasiloxane and Acrylates/Polytrimethylsiloxymethacrylate Copolymer	27.80	27.80
XIAMETER™ PMX-0245 Cyclopentasiloxane	Cyclopentasiloxane	12.50	7.50
DOWSIL™ EP-9289 LL Cosmetic Powder	Dimethicone/Vinyl Dimethicone crosspolymer and Lauroyl Lysine		5.00

**Table 5 & 6 (Cont.)**

	DOWSIL™ EP-9289 LL Cosmetic Powder
After application	
Shine	**
Color intensity	**
After 1 hour	
Shine	*
Color intensity	***

95% confidence level and \*\*: 99% confidence level \*\*\*: 99.9% confidence level.

5% DOWSIL™ EP-9289 LL Cosmetic Powder confer more shine and a higher color intensity just after application and after 1 hour compared to the Control lipstick

**Summary of Benefits.**

Color code:	XXX = Key function, benefit			XX = Secondary function, benefit			X = Some benefit	
Powder ref.	Optical effects	Textures & sensory	Compaction aid	Powder flow	Thickening & gelling	Oil, sebum absorbency	Opacifying & coverage	Other benefits and specifics
DOWSIL™ 9506 Powder		XXX			X	XX		
DOWSIL™ 9701 Cosmetic Powder		XX		XXX	X	XX	X	Some wrinkle masking
DOWSIL™ EP-9289 LL Cosmetic Powder		XXX	XXX	X		XX	X	

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