



Technical Data Sheet

DOWSIL™ 7-3101 Elastomer Blend HIP Emulsion  
DOWSIL™ 7-3118 EBAP HIP Emulsion

INCI Name: Cyclopentasiloxane (and) Dimethicone Crosspolymer (and) Dimethicone (and) Laureth-23 (and) Laureth-4

Features & Benefits

- High internal phase (85% active) emulsion
- Low surfactant concentrations
- Easily diluted with water
- Quick and easy formulation development
- Provides a simple way to modify esthetics and performance of existing formulations
- Formulations can be easily adjusted
- Process equipment can be cleaned with water

Composition

- Approximately 8.5% dimethicone crosspolymer in cyclopentasiloxane and dimethicone emulsified in water
- Includes a Laureth-23 and Laureth-4 surfactant package
- Preservative package differentiated for your formulation needs

Applications

- Skin care applications (e.g. lotions and creams, gels, spray moisturizers, wipes).

Typical Properties

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

CTM <sup>1</sup>	Property	Unit	7-3101	7-3118
0050	Viscosity	cP	30,000	30,000
0208	% solids	%	15	15
0219	Microbial plate count	cfu/ml	< 100	< 100
	Preservative		Phenoxyethanol, methylparaben, isopropylparaben, isobutylparaben, butylparaben	Phenoxyethanol Potassium-sorbate

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

Description

DOWSIL™ 7-3101 Elastomer Blend HIP Emulsion and DOWSIL™ 7-3118 EBAP HIP Emulsion are high internal phase (HIP) emulsions of dimethicone crosspolymer in cyclopentasiloxane and dimethicone that are designed to facilitate the rapid development of skin care formulations which contain these emollients. These emulsions have been prepared using a proprietary process to give a particle size similar to the silicone elastomer gels in the emulsion (average particle size 7–10 μ), and have been stabilized with nonionic surfactants to provide maximum compatibility in formulations that contain other surfactants.

## How To Use

DOWSIL™ elastomer blend emulsions can be used alone, or in combination with others in the HIP family of emulsions to rapidly develop stable skin care formulations. For example, a simple body cream (see Table 1) can be made by diluting the HIP emulsion with water and adding a thickener such as carbomer to achieve the desired consistency. Adding a cosmetic wax such as DOWSIL™ 2501 Cosmetic Wax with fragrances to the cream will give you a silky finish.

The esthetics of an existing formulation can be modified by simply adding the elastomer emulsion to the formulation. These are also compatible with typical cream and lotion formulations, including those based on stearates and fatty alcohols

A clear serum base (see Table 2) can be produced by including a water-soluble humectant at sufficient concentration to adjust the refractive index of the water phase to match that of the emollient phase

Use of the elastomer blend emulsions will also give you the added benefit of easy clean up. Since the silicone elastomer is already emulsified into water, this eliminates the need to use solvents such as cyclomethicone for cleaning process equipment. The elastomer blend emulsion can be rinsed away with water

Table 1: Body cream

This formulation is a simple cream that features the luxurious feel of silicone elastomer. Small amounts of either water-soluble or oil-soluble active ingredients can be added to Phase A to provide the desired effects to the finished product.

Ingredient	wt %	Trade name	Supplier
<b>Phase A</b>			
1. De-ionized water	19.50		
2. Acrylates/C10-30 Alkyl Acrylate Crosspolymer	0.60	Carbopol® ETD 2020	Noveon Inc.
3. Fragrance	0.30	Refreshing Rain Fragrance	Bell Flavors and Fragrances
4. Cyclopentasiloxane (and) Dimethicone Crosspolymer (and) Dimethicone (and) Laureth-4 (and) Laureth-23	70.50	DOWSIL 7-3101 Elastomer Blend HIP Emulsion	The Dow Chemical Company
<b>Phase B</b>			
5. Bis-PEG-18 Methyl Ether Dimethyl Silane	8.10	DOWSIL 2501 Cosmetic Wax	The Dow Chemical Company
<b>Phase C</b>			
6. Preservative (choice)	q.s.		
<b>Procedure</b>			
<ul style="list-style-type: none"><li>• Disperse the Carbopol into the water and mix until uniform.</li><li>• Mix the remainder of the Phase A ingredients into the Carbopol dispersion.</li><li>• Heat Phase A ingredients to 70°C-75°C (158°F-167°F).</li><li>• Heat Phase B to 70°C-75°C (158°F-167°F).</li><li>• Add Phase B to Phase A with gentle mixing.</li><li>• Remove from heat and continue mixing while cooling to room temperature.</li><li>• Add Phase C (preservative) and mix until uniform.</li></ul>			

**Table 2: Clear moisturizing serum base.**

This formulation is a simple base formula that can be used as the starting point for a variety of different products. For example, water-soluble active ingredients such as botanical extracts can be substituted for part of the water. To maintain clarity, it may be necessary to add a small amount of either glycerin or water to rebalance the refractive index of the water phase.

Ingredient	wt %	Trade name	Supplier
<b>Phase A</b>			
1. Acrylates/C10-30 Alkyl Acrylate Crosspolymer	0.26	Carbopol® ETD 2020	Noveon Inc.
2. De-ionized water	25.74		
3. Glycerin	30.00	Glycerin	Fisher Chemical Company
4. Triethanolamine	0.50		
5. Cyclopentasiloxane (and) Dimethicone Crosspolymer (and) Dimethicone (and) Laureth-4 (and) Laureth-23	43.50	DOWSIL 7-3101 Elastomer Blend HIP Emulsion	The Dow Chemical Company
<b>Phase B</b>			
6. Preservative (choice)	q.s.		
<b>Procedure</b>			
<ul style="list-style-type: none"> <li>• Mix Phase A ingredients in order, making sure the carbopol is completely dispersed before continuing.</li> <li>• Mix until uniform.</li> <li>• Add Phase C (preservative) and mix until uniform.</li> </ul>			

**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](http://WWW.CONSUMER.DOW.COM), OR FROM YOUR DOW SALES APPLICATION ENGINEER, OR DISTRIBUTOR, OR BY CALLING DOW CUSTOMER SERVICE.

**Usable Life And Storage** Avoid freezing or prolonged exposure of material to temperatures below 0°C (32°F).  
When stored at or below 50°C (122°F) in the original unopened containers, these products have a usable life of 540 days from the date of production.

**Packaging Information** These products are available in 18 kg pails and 195 kg drums.  
Samples are available in 500 ml tubs

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

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