



Technical Data Sheet

DOWSIL™ 7-3100 Gum Blend HIP Emulsion

FEATURES

- High internal phase (84% active) emulsion
- Small particle size for internal phase
- Low surfactant concentration
- Easily diluted with water

BENEFITS

- 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 12.5% ultra-high viscosity dimethiconol (silicone gum) in cyclopentasiloxane emulsified in water
- Includes a Laureth-23 & Laureth-4 surfactant package as well as preservatives

INCI Name: Cyclopentasiloxane (and) Dimethiconol (and) Laureth-4 (and) Laureth-23

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.

Test*	Property	Unit	Result
0050	Viscosity	cP	150,000
0208	% solids	%	15
0219	Microbial plate count	cfu/ml	< 100

*CTM: Corporate Test Method, copies of CTM's are available on request.

DESCRIPTION

DOWSIL™ 7-3100 Gum Blend HIP Emulsion is a High Internal Phase (HIP) emulsion of ultra-high viscosity dimethiconol in cyclopentasiloxane that is designed to facilitate the rapid development of skin care formulations which contain this emollient.

DOWSIL 7-3100 Emulsion has been prepared using a patented process that produces a small particle size (average particle size 0.9-1.2f.!) and has been stabilized with a nonionic surfactant package to provide maximum compatibility in formulations that contain other surfactants.

HOW TO USE

DOWSIL 7-3100 Emulsion can be used alone, or in combination with others in the HIP family of emulsions to rapidly develop stable skin care formulations. Preemulsification of the silicone gum blend (dimethiconol and cyclopentasiloxane) avoids the problem of gum separation that can sometimes occur when silicone gum

blends are included in the oil phase of an emulsion formula. The formulation shown in Table 1 illustrates how DOWSIL 7-3100 Emulsion can be included in a conventional hand and body lotion that is based on a TEA-stearate emulsion system.

In addition to creams and lotions, DOWSIL 7-3100 Emulsion can be formulated in low viscosity sprays or liquids (see Table 2) by diluting the HIP emulsion with water to give the desired concentrations of emollients. In most cases, a small amount of thickener may be needed to prevent separation in the formulation.

Use of the HIP Emulsion concentrate will also give you added benefit of easy clean up. The water preemulsified nature of this concentrate allows for cleanout without the need for cyclopentasiloxane or other solvents in process equipment.

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.

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, this product has a usable life of 12 months from the date of production.

PACKAGING INFORMATION

This product is available in 18kg pails and 180kg drums.

Samples are available in 500ml 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 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.

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Table 1: Hand and body lotion.

Ingredient	wt %	Trade name	Supplier
Phase A			
1. Stearic Acid	2.0	PRISTERENE™ 4916	Uniqema
2. Glyceryl Stearate (and) PEG-100 Stearate	2.0	Arlacel™ 165	Uniqema
3. Cetyl Alcohol	3.0	Lanette® 16	Cognis Corporation
4. Petrolatum	10.0	Penreco® Snow	Penreco
Phase B			
5. Water	78.4		
6. Triethanolamine	0.8		
Phase C			
7. Cyclopentasiloxane (and) Dimethiconol (and) Laureth-4 (and) Laureth-23	3.6	DOWSIL 7-3100 Gum Blend HIP Emulsion	The Dow Chemical Company
8. DM DM Hydantoin	0.2	Glydant®	Lonza

Procedure

- Heat the Phase A and Phase B in separate containers to 70°C-75°C (158°F-167°F) and mix each phase until uniform
- Add Phase A to Phase B with rapid mixing
- Cool the emulsion to about 40°C (104°F)
- Add the Phase C ingredients with gentle mixing. Continue mixing until uniform

Table 2: Body spray.

Ingredient	wt %	Trade name	Supplier
Phase A			
1. Triethanolamine	0.12	Triethanolamine, 98%	BASF Corporation
2. Acrylates/C10-30 Alkyl Acrylate Crosspolymer	0.15	Carbopol® ETD 2020	Noveon Inc.
3. De-ionized water	q.s.		
4. DM DM Hydantoin	0.01	Glydant®	Lonza
Phase B			
5. Cyclopentasiloxane (and) Dimethiconol (and) Laureth-4 (and) Laureth-23	43.50	DOWSIL 7-3100 Gum Blend HIP Emulsion	The Dow Chemical Company

Procedure

- Mix Phase A ingredients in order
- Dissolve ingredient 4 in de-ionized water
- Add Phase B ingredients to Phase A with mixing
- Mix until uniform

