

Dow Corning[®] TI-3021 Silicone Elastomer Blend

FEATURES & BENEFITS

- Contributes to a silky, smooth feel in formulations
- Long lasting skin feel
- Provides thickening in anhydrous and w/o emulsion formulations
- Contains non-volatile dimethicone as carrier
- Non-flammable
- Can be used in either hot and cold processes

COMPOSITION

- Silicone elastomer blended with a low viscosity (5 cSt) dimethicone
- INCI name: Dimethicone and Dimethicone Crosspolymer

REGULATORY SUPPORT

Ingredient Information Package (IIP)

- Ingredient Regulatory Information
- Elemental Impurities
- Summary of Health Data or Opinion Letter

Formulation ingredient for topical consumer healthcare applications

APPLICATIONS

- *Dow Corning*[®] TI-3021 Silicone Elastomer Blend is commonly used in topical formulation due to its silky, smooth non-tacky feel, and long lasting feel on the skin. This silicone elastomer blend is used in a wide range of dermatological consumer, healthcare and medicated skin care applications.

TYPICAL PROPERTIES

Specification Writers: These values are not intended for use in preparing specifications. Please contact your local Dow Corning sales office or your Global Dow Corning Connection before writing specifications on this product.

CTM ¹	Property	Unit	Result
0050	Viscosity	cSt	300,000–500,000
0176	Appearance		Clear to translucent paste. May have slight yellow color. Free of particulate matter.
0079	Infrared identification		Match reference spectrum

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

DESCRIPTION

Dow Corning TI-3021 Silicone Elastomer Blend is a mixture of high molecular weight cross linked silicone (14%) in dimethicone 5 cSt.

SPECIFIC TESTING

- Infrared identification on each batch
- Tested for elemental impurities according to <232> and ICH Q3D guideline for metal impurities, every 2 years.

HOW TO USE

Dow Corning TI-3021 Silicone Elastomer Blend can be formulated into oil-in-water emulsions, water-in-silicone emulsions, water-in-oil emulsions and anhydrous products.

To incorporate *Dow Corning* TI-3021 silicone Elastomer Blend into a formulation, it should be combined with the oil or silicone phase. Make certain *Dow Corning* TI-3021 Silicone Elastomer Blend is uniformly dispersed in the oil/silicone phase before proceeding. The viscosity of *Dow Corning* TI-3021 Silicone Elastomer Blend decreases as it is diluted with other oils.

Processing

Dow Corning TI-3021 Silicone Elastomer Blend is a viscous product but has the unique characteristic of being a sheer thinning material. The following information will aid in the selection of the proper equipment to use when processing *Dow Corning* TI-3021 Silicone Elastomer Blend.

Pump recommendation

GRACO® Bulldog 10:1 Pump with follower plate. For more information, contact GRACO at +1 800 367 4023.

Note: GRACO offers various Bulldog models, and other pump manufacturers may offer similar equipment equally capable of processing the material efficiently. Users should work directly with the pump manufacturer to determine the best design for their needs.

Customer-specific pump design considerations:

1. **Pressure and flow requirements**
 - a) Air supply pressure: will depend on plant's air supply capabilities.
 - b) Discharge pressure: will depend on total pressure required to move the silicone elastomer blend from point A to point B. If pressure drops due to elevation, frictional losses within the piping, fittings, valves, filters, etc., will need to be considered.
 - c) Flow requirements: will depend on how quickly the user wishes to transfer the silicone elastomer blend from a 208 liter (55 gallon) drum into a vessel.
2. **Material viscosity at the application temperature**

Dow Corning TI-3021 Silicone Elastomer Blend is shear thinning. Effective viscosity is 80,000 cP–100,000 cP. This is only an example; it is the responsibility of the user to determine the effective viscosity based on the user's application. Once the material is pushed through the pump by the follower plate and processed in the pump, the product will shear thin and process as a lower-viscosity fluid.
3. **Construction material for wetted parts**

Stainless steel is recommended but carbon steel may also be used.

4. Construction materials for seals and gaskets.

VITON® or TEFLON® materials are recommended. Please contact Dow Corning for alternatives.

REGULATORY INFORMATION

Dow Corning TI-3021 Silicone Elastomer Blend is produced at a Dow Corning manufacturing site registered as part of Dow Corning's global quality system according to ISO 9001:2008.

Dow Corning can provide an Ingredient Information Package (IIP) containing the following information:

- Ingredient Regulatory Information
- Elemental Impurities
- Summary of Health Data or Opinion Letter

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 CORNING WEBSITE AT DOWCORNING.COM, OR FROM YOUR DOW CORNING SALES APPLICATION ENGINEER, OR DISTRIBUTOR, OR BY CALLING DOW CORNING CUSTOMER SERVICE.

USABLE LIFE AND STORAGE

When Stored between -30°C (-22°F) and 60°C (140°F) in the original unopened containers, this product has a usable life of 24 months from the date of production.

PACKAGING INFORMATION

This product is available in 15 kg pails and 180 kg drums.

Samples are available in 0.4 kg cans.

LIMITATIONS

This product is neither tested nor represented as suitable for specific pharmaceutical use. However, should you wish to use this product in a pharmaceutical application, please contact Dow Corning to discuss such potential use.

It is the user's role responsibility to ensure that their intended use of these materials complies with all regulatory and legal requirements applicable to such use in each relevant jurisdiction including targeted geographic regions of manufacture and supply.

HEALTH AND ENVIRONMENTAL INFORMATION

To support Customers in their product safety needs, Dow Corning has an extensive Product Stewardship organization and a team of Product Safety and Regulatory Compliance (PS&RC) specialists available in each area.

For further information, please see our website, dowcorning.com or consult your local Dow Corning representative.

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Table 1: Compatibility Data

Chemical name	Dow Corning® TI-3021 Silicone Elastomer Blend		
	10	50	90
Silicone level (%)			
Capric/caprilic trygliceride	NC	NC	C
Glycerin	NC	NC	NC
Ethyl alcohol	NC	NC	NC
Isododecane	C	C	C
Isopropyl myristate	C	C	C
Mineral oil	NC	NC	C
Octyldodecanol	NC	NC	NC
PEG-400	NC	NC	NC
Propylene glycol	NC	NC	NC
Sorbitan monooleate	NC	NC	NC

C= Compatible, NC= Non Compatible (forms 2 phases)