



Liveo™ TE-9320 Silicone Elastomer Blend

Silicone Topical Excipients

Liveo™ TE-9320 Silicone Elastomer Blend is swollen and dispersed crosslinked polydimethylsiloxane (PDMS) balls in a volatile fluid.

COMPOSITION

Silicone elastomer and volatile Dimethicone (2 cSt) - cross-linked silicone elastomer gel
INCI NAME: Dimethicone (and) Dimethicone Crosspolymer.

Applications, Features & Benefits:

Liveo™ TE-9320 Silicone Elastomer Blend can be used in topical formulations as they offer multifunctional benefits to formulation, including a unique smooth feel, effective delivery of actives and a mattifying effect. The material shows also are non-occlusive property and it enable rheological modification to formulations.

Such silicone Elastomer blend is currently used:

- in a range of drug delivery topical formulations for prescription and over-the-counter therapies focusing on growth indications such as actinic keratosis, atopic dermatitis, psoriasis, pain and scar management.
- in a range of dermatological consumer healthcare, medicated skin care or topical medical devices applications including creams, gel and sunscreen creams.

Liveo™ TE-9320 Silicone Elastomer Blend can be incorporated easily into many product forms:

- Gels, creams and novel forms to improve patient compliance due to unique sensory feel
- Creams and gels that offer a mattifying effect for acne applications

PACKAGING

This product is available in 15 kg pails and 180 kg drums. Samples are available in 0.4 kg cans.

Product information

Colour Clear

Rheological properties

Viscosity 150000 - mPa.s
290000

Thermal properties

Flash point 87 °C ASTM D 92



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Storage and stability

Shelf life

24 months

Additional information

How to use

FORMULATION TIPS

Liveo™ TE-9320 Silicone Elastomer Blend may be formulated into oil-in-water emulsions, water-in-silicone emulsions, water-in-oil emulsions and anhydrous products.

- It may be added to the oil phase or silicone phase in an emulsion formulation.
- It may be post-added to emulsions provided the emulsion is viscous enough for the Liveo™ TE-9320 Silicone Elastomer Blend to be dispersed.
- For ease of use, its viscosity may be reduced by blending with dimethicone or cyclomethicone.
- It may be formulated with organic oils and silicon-based materials with the use of mixers and may be subjected to high shear devices such as homogenizers and sonolators.
- It is dispersible in a variety of liquid oils.
- Because the elastomer is stable, Liveo™ TE-9320 Silicone Elastomer Blend may be subjected to heat for a short duration. When heat is used, the material should be processed in an enclosed vessel to prevent the dimethicone from volatilizing; the vessel should be inerted at temperatures over 140°F.

PROCESSING

Liveo™ TE-9320 Silicone Elastomer Blend is a viscous product but has the unique characteristic of being a shear-thinning material. The following information will aid in the selection of the proper equipment to use when processing Liveo™ TE-9320 Silicone Elastomer Blend out of a drum.

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. 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 55-gal drum into a vessel.



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2. Material viscosity in cP at the application temperature

Liveo™ TE-9320 Silicone Elastomer Blend is shear thinning. Effective viscosity is 80,000-100,000cP. 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 DuPont for alternatives.

CLEAN-UP

Liveo™ ST-Cyclomethicone 5-NF or any silicone fluids, which dilutes the viscosity of Liveo™ TE-9320 Silicone Elastomer Blend to water thin, is recommended for soaking or cleaning equipment. Other non-polar solvents may work as well.

DuPont

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