



SM2059 Reactive Silicone Emulsion

PRODUCT DESCRIPTION

SM2059 is a reactive emulsion of an amine functional silicone polymer in water. Product cures to an elastomeric film without the need for a catalyst.

KEY PERFORMANCE PROPERTIES

- Good lubricity
- Easy release
- High-temperature stability of silicone polymer
- Low volatility of silicone polymer
- Water dispersible

TYPICAL PRODUCT DATA

Property	Value
Emulsifier Type	Cationic
Base Oil	Silanol/Amino
Silicone Content %	35
Viscosity of Contained Oil @25C(77F) (cstks)	-
Density lbs/gal	8.2
Total Solids %*	35-41
Color	off-white
Diluent	water
Storage Stability(months)	12

*%Total solids:% of nonvolatile material in the emulsion

SPECIFICATIONS

Typical property data values should not be used as specifications. Assistance and specifications are available by contacting GE Silicones at 800-255-8886.

APPLICATIONS

CHEMICAL SPECIALTIES

- polishes & household cleaners (Refer to GE bulletin CDS#4635)
- cured coatings on glass containers

TEXTILES (Refer to GE bulletin CDS#5234)

- fiber & thread lubricants
- nonwoven treatments
- softeners & modifiers
- water repellent finishes

PAINT & INK ADDITIVES

- mar resistance

WATER REPELLANT

- particle treatment
- perlite & vermiculite coatings

INSTRUCTIONS FOR USE

% TO USE

Normally used at a concentration of 0.2 to 2.5% silicone. A 2.0% silicone concentration is an excellent starting point for evaluating these products in new applications.

CURE PROPERTIES

-Upon evaporation the product will cure to an elastomeric film

HARD WATER DILUTION

Silicone emulsions are generally stable in hard water. However, should the water supply be of 200 ppm hardness or higher, softened water or boiler condensate is recommended as a diluent.

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Dilution of the emulsion with water may result in the need for additional bacteriostat/fungistat to counteract possible microbial activity. It is recommended that each user evaluate the diluted emulsion before putting it into use. Depending on the specific applications and dilution level, it may be necessary to use additional bacteriostat/fungistat in the diluted product.

Silicone emulsions are shipped with sufficient biocide for preservation. Shipments of emulsions with sufficient biocide for all dilution levels in all applications is not feasible. Therefore, it is recommended that each user evaluate whether it is necessary to add additional biocide to diluted products.

REACTIVE FLUID EMULSIONS

The reactive silicone emulsions may not be compatible with certain materials. They are deactivated by acidic materials and may cause gellation of materials containing hydroxy (-OH) groups. Other materials such as anionics, lower alcohols, salts, etc., may break the silicone emulsion. It is recommended that any mixture of reactive emulsions with other materials be thoroughly checked before it is put into factory production.

FREEZE/THAW STABILITY OF GE SILICONE EMULSIONS

GE Silicones' emulsions are divided into two groups based on freeze/thaw stability.

Group I consists of silicone emulsions capable of going through repeated freeze/thaw cycles, i.e., if a container of emulsion is frozen and then properly thawed, there should be no detrimental effect relative to the subsequent performance of the product. "Properly thawed" means that the emulsion has completely melted (at less than 66C/150F) to a liquid state before any agitation of the product is attempted.

These comments apply only to the emulsion itself. As with any water-containing material, damage to the container may result from expansion of the liquid during freezing. Containers should therefore be inspected prior to thawing to insure that no leakage of liquid has or will occur.

If the sample is of uniform appearance, the emulsion may be suitable for use. If the emulsion is not uniform, it probably will not be suitable for use.

It is recommended that all silicone emulsions are shipped in heated vans. All precautions to prevent freezing must be made in the handling, transferring and shipping of emulsions.

Group I: Potentially Stable

SM2059	SM2154	SM2169
SM2068A	SM2112	SM2159
SM2162	SM2138	SM2658
SM2163	SM2101	SM2765/SM2725
SM2140	SM2167	

HANDLING AND SAFETY

Material Safety Data Sheets are available upon request from GE Silicones. Similar information for solvents and other chemicals used with GE products should be obtained from your suppliers. When solvents are used, proper safety precautions must be observed.

STORAGE WARRANTY PERIOD

The warranty period is 12 months from date of shipment from GE Silicones if stored in the original unopened container at above freezing temperatures. Recommended extended storage container conditions: 4 to 27C(40 to 80F).

AVAILABILITY

SM2059 emulsion may be ordered from GE Silicones, Waterford, New York 12188, the GE Silicones Sales office nearest you or an authorized GE silicone product distributor.

GOVERNMENT REQUIREMENT

Prior to considering use of a GE Silicones' product in fulfilling any government requirement, please contact the Government and Trade Compliance office at 413-448-4624.

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LIMITED WARRANTY

GE Silicones warrants that its products will conform to GE Silicones' internal specifications at the time of application or use, provided that the product is stored in accordance with GE Silicones' recommendations and used or applied before the earliest of (1) any "Use Before Date" indicated on the product package, (2) one year from date of shipment by GE Silicones, or (3) expiration of such other period or recommended storage time stated in GE Silicones' product literature for such product. If notified in writing of a claim within six months of a product's use or application, GE Silicones will, at its option, replace, or refund the purchase price of, any GE Silicones product which does not satisfy the foregoing warranty.

THE FOREGOING SHALL CONSTITUTE THE SOLE AND EXCLUSIVE REMEDY FOR DEFECTS IN, OR FAILURE OF, ANY PRODUCT, AND THE SOLE AND EXCLUSIVE LIABILITY OF GENERAL ELECTRIC COMPANY THEREFOR. THE WARRANTY STATED ABOVE IS IN LIEU OF ALL OTHER WARRANTIES, WRITTEN OR ORAL, STATUTORY, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

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NOTE: For many products, GE Silicones may be able to offer a more extensive, application specific warranty. For further information, contact your GE Silicones field representative.



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