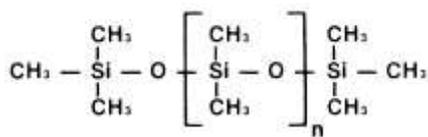


Silicone Antifoam Agents for Industrial Applications

COMPOSITION AND REGULATORY STATUS

Applied Material Solutions line of industrial-grade antifoam agents are water-based, silicone emulsions (as polydimethylsiloxane) designed to control foam in a variety of aqueous industrial applications. The functional properties developed especially for these antifoams to eliminate and prevent excessive foam include: quick dispersibility, slight insolubility, relative stability, and a high degree of spreadability in the foaming system. The primary active ingredient is polydimethylsiloxane, an inert silicone polymer with the following structure:



n represents repeating dimethylsiloxane units

Our industrial-grade silicone antifoam emulsions utilize only food-grade, nonionic emulsifiers and do not contain reportable levels of any hazardous ingredient. Therefore, when used properly, these antifoam agents are considered a relatively safe class of chemical additives.

APPLICATION AND USAGE GUIDELINES

To control foam, our silicone antifoam agents may be added “as is” directly to the foaming process, or they may be diluted with water immediately prior to application. While it is sometimes preferable to dilute the antifoam prior to use, please keep in mind that a diluted antifoam is not stable for a long period of time and should be used as soon as possible. It is also advisable to ensure that the diluted antifoam is periodically mixed or thoroughly stirred prior to use. (Note: Undiluted antifoam does not require stirring prior to use.) Do not store diluted antifoam agents for a long period of time because product stability may be compromised.

Each foaming problem is unique and requires different treatment levels of antifoam. Use only the minimum amount of antifoam required to control the foam. Experimentation is usually necessary to optimize the amount of antifoam used in a given process. A good starting point is in part dependent upon which antifoam product is being tested, but 50 -500ppm is an acceptable range with which to begin testing. As with any antifoam or defoamer, thorough testing should always be conducted to determine the suitability and compatibility of the antifoam with the foaming system and processing equipment.

STORAGE

Applied Material Solutions silicone antifoam agents are stable and long-lasting; nevertheless, the products should be protected from freezing and prolonged exposure to direct sources of heat, moisture, and sunlight. Should the antifoam freeze, thaw the product at room temperature with the container closed and gently stir once completely thawed. A slight change in appearance may result, but performance should not be affected. Storage temperatures at or below room temperature are preferred, but not necessary. Antifoam emulsions are ultimately perishable commodities and should be afforded an equivalent level of care. Use the product in a timely fashion after initially opening the container, and close tightly after use. Applied Material Solutions recommends that unopened antifoam agents be used within one year.

LIMITED WARRANTY – PLEASE READ CAREFULLY

For any given application, it is the responsibility of the end-user to assess the antifoam for suitability, performance, and safety. Applied Material Solutions' sole warranty is that the antifoam, as supplied at the time of shipment, will meet the specifications described on the Certificate of Analysis. All other warranties, either express or implied, are disclaimed by Applied Material Solutions, including the warranties of merchantability and of fitness for use. Applied Material Solutions' sole liability is limited to the refund of the purchase price or replacement of any antifoam shown to be other than as warranted. Applied Material Solutions disclaims any liability for any incidental or consequential damages resulting from the use of this product.

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PRODUCT & PACKAGING INFORMATION

Product	Active Content	Appearance	Weight per Gallon	Typical Viscosity @ 20 rpm	Typical pH (neat)
TRANS-1030 D	3% Silicone	Thin, milky-white liquid	8.34 #	200 – 300 cP	7.25 – 8.25
TRANS-5 D	5% Silicone	Thin, milky-white liquid	8.34 #	100 – 200 cP	3.75 – 4.25
TRANS-10 D	10% Silicone	Opaque white liquid	8.34 #	1000 – 4000 cP	7.50 – 8.25
TRANS-10 AD	10% Silicone	Opaque white liquid	8.42 #	400 – 1200 cP	3.50 – 4.00
TRANS-20 D	20% Silicone	Opaque white liquid	8.35 #	1000 – 1500 cP	3.50 – 4.00
TRANS-30 D	30% Silicone	Thick white liquid	8.37 #	800 – 2000 cP	3.50 – 4.50

PACKAGING OPTIONS

Applied Material Solutions antifoam emulsions are available in 55-gallon blue poly drums (net wt. 450 lb.) & 5-gallon HDPE pails (net wt. 40 lb.). By special request, the following packaging options are also available: bulk tanker, 275-gallon totes, 55-gallon lined openhead or tighthead steel drums, 30 or 15-gallon poly drums, and 1-gallon jugs. Special requests may necessitate longer lead times.

SOME INDUSTRIAL APPLICATIONS UTILIZING ANTIFOAMS

CHEMICAL PROCESSING

Hot Aqueous Systems
Ink Manufacture-Water Based Insecticides
 Latex Processing
 Resin Polymerization
 Soap Manufacture
 Starch Processing
 Wool Fats

MISCELLANEOUS

Lagoon Aeration
 Boiler Water Defoaming
Carpet Cleaning After-Tank
 Jacuzzi Baths
 Leather Finishing
 Metalworking
 Rendering
 Swimming Pools

PETROLEUM & PLASTIC

Gas Scrubbing (DEA)
 Glycol Dehydrators
 Propane Deasphalting
 Udex Units
 Latex Binders
 Vinyl Latex Emulsions

WASTE TREATMENT

Aeration
 Evaporation
 Neutralization
 Settling Ponds

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