

Baysilone* Antifoam 3099

Product Description

Baysilone Antifoam 3099 is a 30% emulsion of modified polydimethylsiloxane incorporating non-ionic auxiliaries, designed as antifoam and defoamer in aqueous or polar organic media. The product exhibits excellent foam destruction and control under high temperature, it is nearly chemically inert so it does not react with media to be defoamed, nor does it corrode containers or apparatus. Therefore, it is very suitable as process antifoam in chemical synthesis and distillations. The active substance of the antifoam is non-volatile.

Baysilone Antifoam 3099 exhibits a very high dilution stability. The lower the concentration of such dilutions, the more stable they are. Dilution ratios are usually 1-10%, making it ideal for formulating.

Key Performance Properties

- Antifoam for defoaming aqueous or polar organic foaming media, like surfactant solutions or emulsions.
- With the high temperature and chemical stability and its non-corrosive property, the product is designed for the use in chemical processes, like distillations and reflux reactions.
- This product shows an excellent defoaming stability in strongly alkaline media.
- The high active content makes this product cost effective and allows the easy formulation of diluted versions.
- The low viscosity emulsion formulation allows easy processing and aids the formulation of aqueous dilutions.

Typical Properties

Property	Unit	Result
Physical Form	-	White, pour able liquid
Emulsifiers	-	Non-ionic, NPEO free
Silicone Content	%	30
pH-value	-	4 - 5
Specific Gravity at 20°C (EG A.3 / DIN 51757)	g·cm ⁻³	1.01
Viscosity at 20°C	mm ² ·s ⁻¹	40 - 200

Table 1: Typical product data values should not be used as specifications. Assistance and specifications are available by contacting Momentive performance materials.

Applications

Baysilone Antifoam 3099 is used as foam suppressant in aqueous solutions, particularly those containing surfactants. Its area of effectiveness ranges from acidic to strongly alkaline media (around pH 13 – 14) and the boiling point of water (even under pressure). Baysilone Antifoam 3099 can be used to prevent the formation of foam and to destroy foam which is already present. Preventive use is the generally more economical of these alternatives.

The optimum addition level depends on many factors and is best determined in the medium to be defoamed. We recommend to run a small series of trials under simulated conditions, like in the same foaming medium under comparable mechanical impact and temperature. A silicone active concentration of 10 - 50ppm in the foaming medium is efficient in many applications. When evaluating antifoam emulsions, we suggest to start the evaluation at about 10ppm silicone active level. Then adjust in either direction to determine the minimum effective concentration for the specific system requiring foam control.

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Because of its relative low viscosity, the product can be used as supplied, but equally good results can be obtained if it is diluted before use.

Baysilone Antifoam 3099 may separate bottom water upon storage and should be mixed with low shear mixing equipment (such as a drum pump) prior to use.

Diluting Antifoam Emulsions

Add water while maintaining mild agitation, both before and during use. This enables the emulsion to continue performing as a defoamer.

These simple dilutions with water should be used within a few days. The diluted product has only limited resistance to shaking and transportation. To improve the storage stability of the diluted product please follow the instructions provided below.

Making Stable Low-Solid Emulsions

Thickeners can be added to antifoam emulsions to make them dilution-stable. The final emulsion viscosity should be between 1000 and 2000 mm²/ s. Viscosity is controlled by the amount of thickener, which should be dispersed in water before the antifoam is added.

Formulating a 10% or lower industrial grade defoamer:

Step	Ingredients	Procedure	Supplier
Part A	62.3% water 4.0% Acrysol ASE-108	Mix Part A	- (Rohm & Haas) Mix Part A
Part B	2.7% of a 10% NaOH solution	Add Part B until clear viscous solution Forms at pH of about 6-7.	-
Part C:	31.0% antifoam emulsion	Add Part C and stir until uniform.	Momentive performance materials

Handling and Safety

The product safety information is not included in this datasheet. When handling chemicals, proper safety precautions must be observed and suitable personal protection equipment is required. Before handling this product, consult the technical and safety data sheets and container labels for safe use. Safety Data Sheets are available via our web page or upon request at Momentive performance materials.

Similar information for solvents and other chemicals recommended in this data sheet should be obtained from the respective suppliers.

Packaging

Baysilone Antifoam 3099 is available in 50 kg cans, and 200 kg drums.

Availability

Products may be ordered from Momentive performance materials, the Momentive performance materials Sales office nearest you or where appropriate, an authorized Momentive performance materials product distributor. Contact information is supplied on the last page of this datasheet.



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