

# SILFOAM<sup>®</sup> SE 23

## Silicone Antifoams (HACCP)

SILFOAM<sup>®</sup> SE 23 is a 30% active, high viscosity emulsion designed for controlling foam in aqueous systems.

SILFOAM<sup>®</sup> SE 23 is safe to be used in alkaline and high temperature applications. It provides excellent foam knockdown as well as prevents foam reoccurrence longer than most conventional defoamers. SILFOAM<sup>®</sup> SE 23 can also be used as a dispersion/coating leveling agent.

SILFOAM<sup>®</sup> SE 23 is suitable for use in indirect food contact as well as secondary direct food additive applications listed under FDA 21 CFR176.170; 176.180; 176.200; 176.210;175.300; 177.2600; 178.3400; and 173.340. Some of the listed applications have regulatory limitations, please contact your Wacker Sales Representative for further information.

SILFOAM<sup>®</sup> SE 23 is registered by NSF to Category Code 3D (as a fruit and vegetable washing product) and Q5 (for use as foam control agent in egg washing machines). Please refer to the NSF sections for further guidelines on these applications.

## Technical data

### General Characteristics

Property	Condition	Value	Method
Active content	-	approx. 30 % Actives	-
Appearance	-	White, creamy liquid	WSTM 3043
Dosage up-limit if used as secondary direct food additive	-	30 ppm	-
Ionic character	-	Nonionic	-
Viscosity, dynamic	25 °C	approx. 4500 cP	WSTM 3342
pH	-	4.3	WSTM 3391

These figures are only intended as a guide and should not be used in preparing specifications.

All the information provided is in accordance with the present state of our knowledge. Nonetheless, we disclaim any warranty or liability whatsoever and reserve the right, at any time, to effect technical alterations. The information provided, as well as the product's fitness for an intended application, should be checked by the buyer in preliminary trials. Contractual terms and conditions always take precedence. This disclaimer of warranty and liability also applies particularly in foreign countries with respect to third parties' rights.

## Application details

SILFOAM® SE 23 is a versatile defoamer that is suitable to be used in many industrial and food applications.

SILFOAM® SE 23 can be added easily to most foaming systems as is or by diluting with either water or a portion of the foaming system. In hot systems and in processes where maximum uniformity of the dispersion is required, SILFOAM® SE 23 is best diluted with cool water before adding it to the foaming solution.

Prior to use, SILFOAM® SE 23 should be gently stirred with minimum shear to assure uniformity of the emulsion.

## Processing

### Procedure for Dilution and Stabilization of SILFOAM® SE 23 at Concentrations Less Than 6% Silicone

In preparing a dispersion of SILFOAM® SE 23 that contains less than 6% silicone, use the following instructions:

- A. Prepare the stabilizing solution using any of the suggested water dispersible polymers listed in **Figure 1**.
- B. If the solution is prepared using hot water, the solution should be cooled to 35°C (95°F) or lower.
- C. The desired amount of SILFOAM® SE 23 should be added to the stock solution. If a low-shear mixer is used, such as a marine impeller, the emulsion should be mixed until homogeneous. However, if a high shear mixer is used, such as a Cowles Dissolver or Turrax, the emulsion should be mixed only for a minimum amount of time to give a homogeneous dispersion.
- D. For long term storage of the diluted emulsion, a bactericide should be included immediately after the cool down (step B) to prevent bacteria growth.

NOTE: In those cases where the diluted emulsion is to be used in food plants or as a secondary direct food additive for human consumption as defined under Title 21 paragraph 173.340 of the FDA regulations, the biocide chosen should be stable in the pH range of the finished diluted material as well as meet the necessary FDA requirements.

Trade Name	Source
Acrysol ASE 60*	Rohm & Haas <a href="http://www.rohmhaas.com">www.rohmhaas.com</a>
Carbopol 981	Noveon Inc. <a href="http://www.noveoninc.com">www.noveoninc.com</a>
Any of these polymers can be dispersed in water according to the supplier's instructions to obtain a solution viscosity of 500-1000 cP at 25°C (77°F). In both cases it is necessary to bring the system to a pH of 6.5 to 8 with sodium hydroxide.	
*Acrysol ASE-60 is not suitable as stabilizer when the defoamer is to be used in food plants. Carbopol 981 is suitable for this application when neutralized with sodium hydroxide.	

## Procedure for Diluting SILFOAM® SE 23 FOOD GRADE to 6% or more Silicone

One part of SILFOAM® SE 23 FOOD GRADE may be diluted with up to four parts of water to give a stable dispersion as follows:

- A. Charge desired amount of water to a suitable mixing vessel.
- B. Add a suitable bactericide to the water to prevent bacteria growth if the diluted emulsion is to be stored for more than 2 weeks.

NOTE: In those cases where the diluted emulsion is to be used in food plants or as a secondary direct food additive for human consumption as defined under Title 21 paragraph 173.340 of the FDA regulations, the biocide chosen should be stable in the pH range of the finished diluted material as well as meet the necessary FDA requirements.

- C. Slowly charge the desired amount of SILFOAM® SE 23 FOOD GRADE to the water, then mix immediately for a period of time that just gives a homogeneous dispersion.

NOTE: The stability of the diluted emulsion may be better if the water is added to the emulsion while mixing, but for convenience, the outlined procedure is preferred. Also, it may be advantageous to add the SILFOAM® SE 23 FOOD GRADE under the surface of the water, depending on mixing equipment utilized.

## Packaging and storage

### Storage

The "Best use before end date" of each batch is shown on the Certificate of Analysis. Storage beyond the date specified on the Certificate of Analysis does not necessarily mean that the product is no longer usable. In this case however, the properties required for the intended use must be checked for quality assurance reasons.

## Safety notes

For specific information regarding safe handling of this material, please refer to the Safety Data Sheet.

## QR Code SILFOAM® SE 23



### For technical, quality or product safety questions, please contact:

**Wacker Chemie AG**, Hanns-Seidel-Platz 4, 81737 Munich, Germany  
info@wacker.com, www.wacker.com

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