

Choosing the correct silicone antifoam concentration



When testing the effectiveness and practicality of a silicone antifoam from Dow, a good starting point is to add the antifoam to the foaming medium at a concentration that represents 10 parts per million (ppm) silicone (silicone antifoam active).

Typically, 10 ppm is the maximum concentration of silicone allowed according to FDA and European food additive regulations. If appropriate, further reduce the antifoam addition level to obtain the required level of foam control. However, always refer

to local food profiles to determine the maximum level allowed for the specific type of food. For applications other than food, 50 ppm of antifoam actives is the most common starting point, adjust as needed. Consult the product technical data sheet for additional details on use levels.

This formula can be used to calculate how much silicone antifoam should be added to achieve the recommended ppm level of silicone antifoam active:

$$\frac{(\text{ppm silicone antifoam active}) \times (\text{amount of solution to be defoamed}^1)}{(\% \text{ active ingredient in antifoam}^2) \times (10,000)} = \text{antifoam to be added}$$

¹Use the same units (liters, gallons, pounds, etc.) to measure the amount of antifoam added and amount of solution to be defoamed.

²Insert "10" for 10% active, "30" for 30% active, etc.

Food processing example for XIAMETER™ Antifoams

To add 10 parts per million of active silicone antifoam to 1,000 kg of foaming solution, add:

- 0.01 kg of XIAMETER™ ACP-1500 Antifoam Compound
- 0.1 kg of XIAMETER™ AFE-1510 Antifoam Emulsion
- 0.05 kg of XIAMETER™ AFE-1520 Antifoam Emulsion or XIAMETER™ ACP-1920 Powdered Antifoam
- 0.033 kg of XIAMETER™ AFE-1530 Antifoam Emulsion

Industrial use example for XIAMETER™ Antifoams

To add 50 parts per million of active silicone antifoam to 1,000 kg of foaming solution, add:

- 0.05 kg of DOWSIL™ ACP-3258 Antifoam Compound or XIAMETER™ 1400 Antifoam Compound
- 0.5kg of XIAMETER™ AFE-1410 Antifoam Emulsion or other 10% actives antifoam or XIAMETER™ AFE-0110 Antifoam Emulsion
- 0.25 kg of XIAMETER™ AFE-0120 Antifoam Emulsion
- 0.165 kg of XIAMETER™ AFE-1430 Antifoam Emulsion

Learn more

For additional information regarding Dow's antifoam solutions, visit www.dow.com/antifoam. Contact information for Dow can be found at www.dow.com/contactus.



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