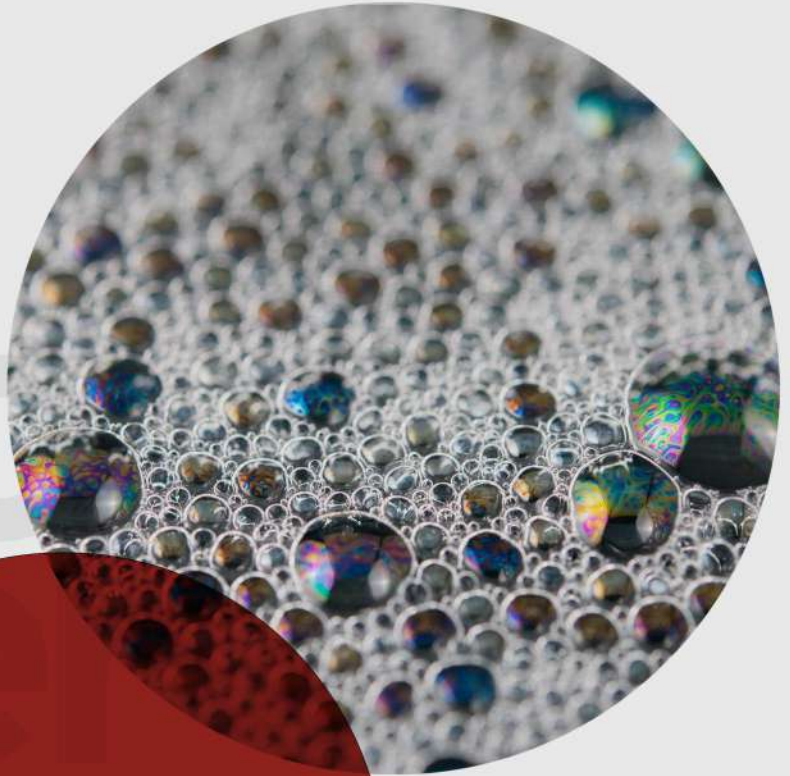




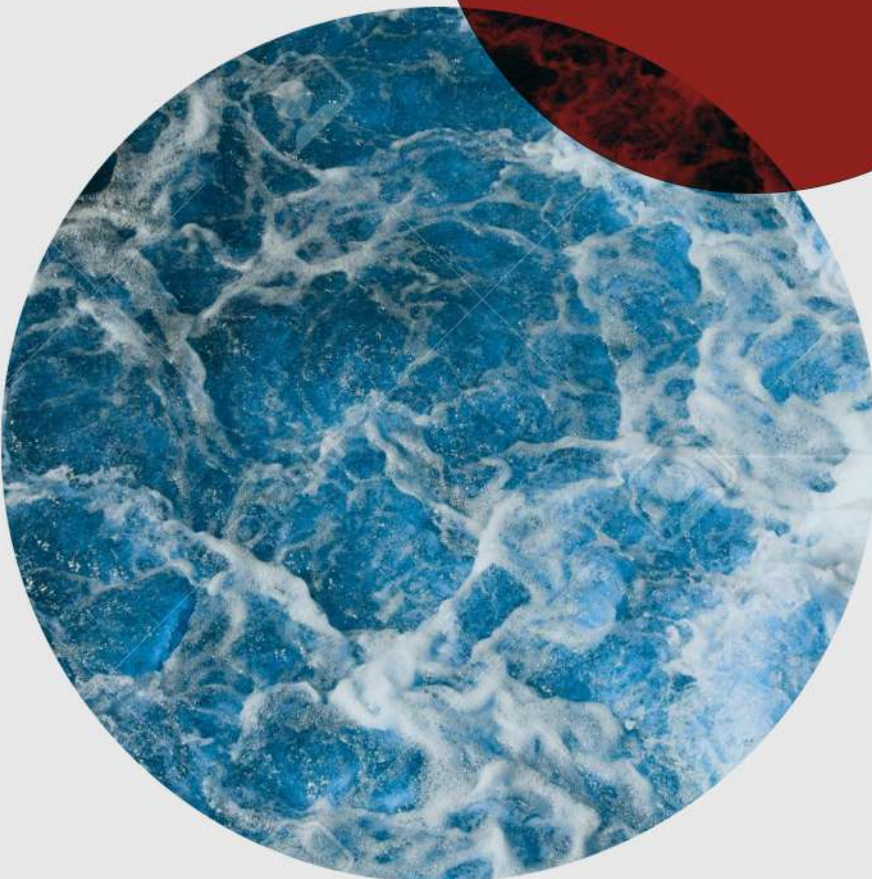
Trio Defo am



DEFOAMER

" A defoamer suppresses or breaks the already generated foam where as an antifoaming agent is a chemical additive that does not allow the formation of foam."

The terms anti-foaming agent and defoamer are often used interchangeably. The additive is used to prevent formation of foam or is added to break a foam already generated.



" We Ease Your Process "



Properties of a Good Defoamer:

- Incompatible with the foaming medium or insoluble in the foaming medium
- Has surface active properties
- Low viscosity and a facility to spread rapidly on foamy surfaces
- Has affinity to the air-liquid surface

Types of Defoamers

- Polydimethylsiloxanes (PDMS) and Other Silicones
 - Hydrocarbon/Mineral Oils
 - Certain Alcohols
 - Stearates and Glycols
-



Mechanism of defoaming




CHALLENGES

" In Industrial processes, foam poses serious problems.They cause defects in the final output and hinder the efficiency of the process."

TEST METHODS

There are several ways to test defoamers.

The easiest is looking at the surface foam. All that is needed is a system for generating foam. Time and amount of defoamer required to break or suppress the foam indicates the efficiency of defoamer.



CLASSIFICATION

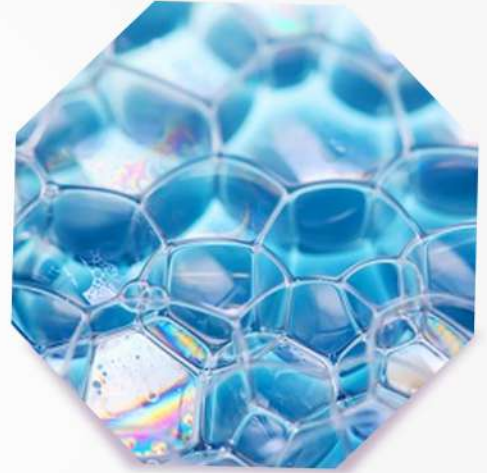
SILICONE BASED DEFOAMERS

Silicone-based defoamers are neat polymers or emulsions with silicone backbones. Emulsifiers are added to ensure that the silicone spreads fast and well in the foaming medium. The silicone compound might also contain organo-modified silicone fluids.

Polydimethylsiloxane is a widely used antifoaming agent and are also suitable in non-aqueous foaming systems like crude oil and oil refining.

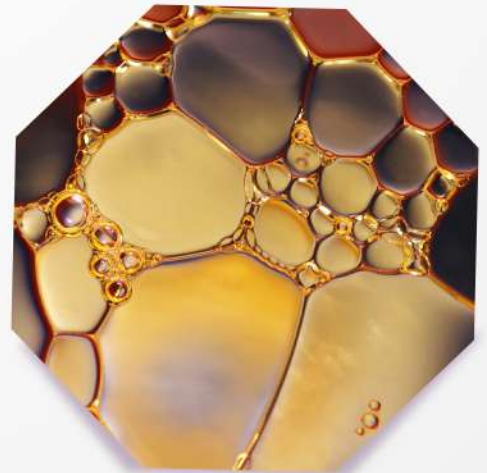
For very demanding applications fluoro-silicones may be suitable.

These are also heavy duty defoamers and are good at both knocking down surface foam and releasing entrained air.



OIL BASED DEFOAMERS

Oil based defoamers have mineral oil, vegetable oil, white oil or any other oil that is insoluble in the foaming medium. These products might also have surfactants to improve emulsification and spreading in the foaming medium. These are heavy duty defoamers and are normally best at knocking down surface foam.



POWDER DEFOAMERS

Powder defoamers are in principle oil based or silicone based defoamers on a particulate inert carrier. These are added to powdered products like cement, plaster and detergents.



CLASSIFICATION

POLYMER BASED DEFOAMERS

Polymers are suitable for use as defoamers in non-aqueous systems where air release is more important than the breakdown of surface foam. These defoamers are often delivered in a solvent carrier like petroleum distillates.



SURFACTANT BASED DEFOAMERS

Surfactant based defoamers contain polyethylene glycol and polypropylene glycol polymers. They are delivered as oils, water solutions, or water based emulsions. Surfactant based defoamer normally have good dispersing properties and are often well suited when deposit problems are an issue.



WATER BASED DEFOAMERS

Water based defoamers are different types of silicones, oils and waxes dispersed in a water base. The oils are often mineral oil or vegetable oils and the waxes are long chain fatty alcohol, fatty acid soaps or esters. These are normally best as deaerators, which means they are best at releasing entrained air.



SELECTION CHART

Silicone Based

Oil Based

Surfactant Based

Polymer Based

Powder Based

Water Based



APPLICATION

TYPE OF DEFOAMER FOR APPLICATION

Pulp & Paper



Paints & Coatings



Food processing



Metal Working Fluids



Pharmaceuticals



Sugar & Distillery



Textiles



Agriculture & Pesticide



Adhesives



Industrial Wastewater Treatment



Oil Well Drilling



Detergents



Construction Chemicals



Personal Care





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