

**Let Dow Corning solve
your foam control problems**

DOW CORNING

Selection guide by application and physical properties

Dow Corning® Product	Agrochemicals	Detergents	Chemical processing	Waste water Treatment	Metal working	Textiles	Food contact	Regulatory status	Additional information	% Active	Emulsifier type	pH	Freeze-thaw stability	Dilution stability (demin. water)	Dilution stability (tap water)	Stability at low pH	Stability at high pH	Stability vs. temperature
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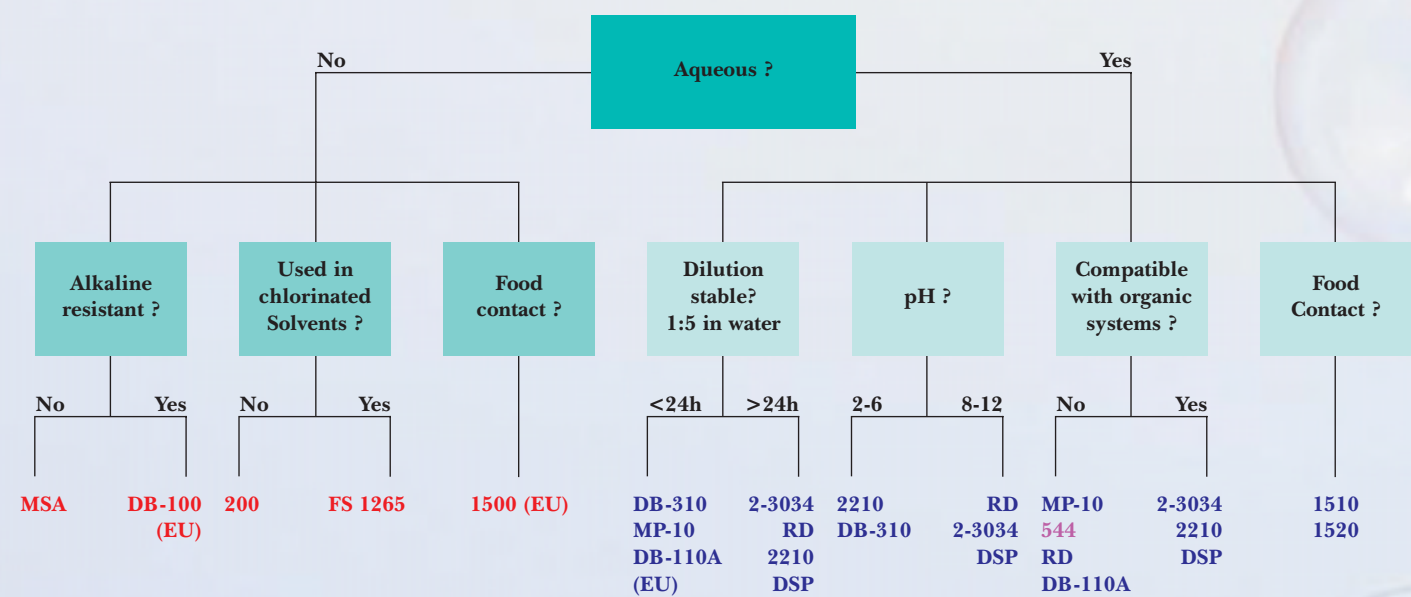
Aqueous systems only																		
Antifoam RD emulsion			xx	xx		xx				10	Non-ionic	5-7	+++	+++	++	++	+++	+
MP-10 Emulsion				xx						7	Non-ionic	5-8	++					
DB-110A (EU) Emulsion		x	xx							10	Non-ionic	6-8	+++	+	+	+	++	+++
DB-310 Emulsion	xx	xx	x					EPA exempt		30	Non-ionic	3-5.5	+++	++	+++	+++	++	++
1510 Silicone Antifoam				x			xx	FDA/BGVV/ EC95.3	for details see Food Profile	10	Non-ionic	3-4	+++					
1520 Silicone Antifoam							xx	FDA/BGVV/ EC95.3	for details see Food Profile	20	Non-ionic	3-4	+++	+	+	+	+	+
Antifoam 2210		x		x	x				organomodified	10	Non-ionic	6-8	+++	+++	+++	+++	+	+
2-3034 Antifoam Emulsion			x		x			FDA	organomodified	58	Non-ionic	6-8		+++	+++	+++	+++	+++
DSP	xx	xx	x	x	x	x		EPA exempt	dilution stable	10	Non-ionic	7-9	+++	+++	+++	++	+++	++

Aqueous or non aqueous systems																		
Antifoam MSA Compound	xx							EPA exempt/ FDA	dispersible in aliphatic solvents	100	n.a.	n.a.	+++					
DB-100 (EU) Antifoam	xx		x					EPA exempt/ FDA	dispersible in aliphatic solvents	100	n.a.	n.a.	+++					
Antifoam 1500 (EU)							xx	FDA/BGVV/ EC95.3	for details see Food Profile	100	n.a.	n.a.	+++					
544 Antifoam Compound		xx				xx			dispersible in water	100	Non-ionic	n.a.	+++					

Non aqueous systems only																		
200 Fluid			xx					for details see Food Profile	available in a range of viscosities	100	n.a.	n.a.	+++					
FS1265 Fluid			x						available in a range of viscosities	100	n.a.	n.a.	+++					

xx recommended x suitable +++ excellent ++ good + fair

Antifoam decision tree



RED = Compound/Fluid
Blue = Emulsion
Pink = Concentrate

Where are antifoams used?

Agrochemicals	Pesticide, Herbicide and Fungicide formulations	Packaging of liquid pesticides	Fertiliser manufacture	Acid manufacture	
Detergents	Liquid detergents	Slurry deaeration	Hard surface cleaners	Bottle filling	Carpet cleaners, Dry cleaning
Chemical processing	In process foam problems	Gas drying	Gas scrubbing	Deaeration of cements	Neutralisation processes
Petrochemicals	Gas/oil separation	Delayed coking	Distillation processes	Asphalt	Drilling muds
Polymers and plastics	Polymer manufacture	Emulsion and suspension polymerisation	Monomer stripping	Carpet backing	Plastic reprocessing
Food and beverage	Food contact applications	Vegetable washing	Bottle washing	Cooking oils	
Fermentation processes	Distillation processes	Alcohol fermentation	Yeast		
Metal working and lubrication oils	Cutting oils	Lubricant additives	Metal reprocessing		
Waste water treatment	Industrial waste treatment	Municipal treatment plants	Cooling towers	Food and Dairy effluents	Surfactant waste streams
Textiles	Dyeing processes	Bleaching	Scouring	Finishing	Sizing

* Many applications may be subject to National or European regulations. The end user is responsible for verification of regulatory compliance.

DOW CORNING SILICONES

Health, Environmental & Regulatory Aspects :

Health, Environmental and Regulatory aspects are key selection criteria for process aids such as Foam Control agents. For Dow Corning, Health, Environmental and Regulatory aspects are an integrated part of product development.

Health hazards :

None of these products are classified as hazardous to human health (EC law).

Environment hazards :

Dow Corning's Foam Control technology is predominantly based on PolyDiMethylSiloxane (PDMS) Chemistry. The environmental fate & effects of PDMS have been extensively studied. PDMS can be efficiently removed from effluents in wastewater treatment plants, and can degrade in soil.

Physical/Chemical hazards :

None. All products have boiling and flashpoints above 100°C, do not display chemical reactivity, acidity or alkalinity.

Regulatory Aspects :

Up to date Product Safety Datasheets as well as complementary information concerning the regulatory aspects can be obtained from our sales offices.

Let Dow Corning solve your foam control problems

The need to control foam.

The presence of foam in production processes can create many unnecessary and costly problems such as reduced equipment capacity and inefficient production runs.

This leads to loss of productivity and increased maintenance costs. Foam can also impact safety in the workplace and effect the quality of finished products.

The solution ? Dow Corning silicone foam control agents.

How Dow Corning silicone foam control agents work.

Dow Corning foam control agents are formulated using silicone fluids. The foam control agent disperses throughout the liquid film which makes up the foam, creating a weakness in the foam-wall and causing it to collapse.

Dow Corning silicone foam control agents have advantages over non silicones.

Defoamers act by destroying foam that has already been formed. Antifoams inhibit the formation of foam acting preventially.

Dow Corning silicone foam control agents act both as defoamers and as antifoams. This makes them very efficient foam control agents. Dow Corning silicone agents can be used in a wider variety of systems than non silicones and are effective at very low concentrations making them also extremely cost effective.

How to use this selection guide.

Go to the left hand side of the table, look at the product range for aqueous and non -aqueous applications. At the top of the table are listed the major applications where foam control agents are required. Choose the product best suited to your needs, not forgetting to check whether that also meets the regulatory requirements.

If your product choice is an emulsion, go to the right hand side of the table to make sure that it will also be suitable for the aqueous environment in terms of temperature and pH stability (low pH is acidic, high pH is alkaline).

If you wish to dilute the emulsion prior to use, make sure that the diluted emulsion will be stable for the time you need.

Alternatively you can also use the "Antifoam Decision Tree".

This chart allows you graphically to choose the product best suited to your application by answering a number of simple questions arriving at a single product selection or a choice of products which will meet your needs.

Correct concentration of silicone foam control agent ?

When testing the effectiveness of Dow Corning silicone foam control agents, a good starting point is to add the foam control agent at 10 parts per million (ppm) of silicone. That equates to 100ppm of a 10% Active antifoam (ie 0.01%), 30 ppm for a 30% Active emulsion or 10ppm for 100% active silicone antifoam fluid or compound. These values are listed in the selection guide.

The results obtained at this concentration will indicate whether you need to increase or reduce the dosage.

WHO TO CONTACT FOR TECHNICAL QUESTIONS OR TO OBTAIN SAMPLES ?

To obtain additional guidance from our technical support staff or to obtain samples, please contact your local Dow Corning Antifoam distributor, the nearest sales office or visit us under www.dowcorning.com.



**UNITED KINGDOM, EIRE, NORDIC COUNTRIES,
BENELUX, SOUTH AFRICA & MIDDLE EAST**

Dow Corning Ltd.
Meriden Business Park
Copse Drive
Allesley, Coventry CV5 9RG
UNITED KINGDOM
Tel: INT + 44 (0)1 676 52 80 00
Fax: INT + 44 (0)1 676 52 80 01

**GERMANY, AUSTRIA, SWITZERLAND &
EASTERN EUROPE**

Dow Corning GmbH
Rheingastr. 34
65201 Wiesbaden
GERMANY
Tel: INT + 49 (0)611 237 203
Fax: INT + 49 (0)611 237 620

FRANCE & NORTH AFRICA

Dow Corning France S.A.
Le Britannia
20, Boulevard Eugene Deruelle
69432 Lyon Cedex 3
FRANCE
Tel: INT + 33 (0)4 72 84 13 60
Fax: INT + 33 (0)4 72 84 13 79

POLAND

Dow Corning Polska Sp. z o.o.
ul. Migdalowa 4
02-769 Warsaw
POLAND
Tel: INT + 48 (0)22 645 14 45
Fax : INT + 48 (0)22 645 14 40

SPAIN & PORTUGAL

Dow Corning Iberica, S.A.
Avda Diagonal 613 - 5º
08028 Barcelona
SPAIN
Tel: INT + 34 93 - 363 69 00
Fax: INT + 34 93 - 363 69 01

**ITALY & EASTERN MEDITERRANEAN
COUNTRIES**

Dow Corning S.p.A.
Via Lombardia, 31/33
20098 - Sesto Ulteriano
Milano
ITALY
Tel: INT + 39 02 98 83 21
Fax: INT + 39 02 98 80 710

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