



Consumer Solutions

Pulp Manufacturing Solutions

Decades of Proven Performance

Emulsions • Concentrates • Compounds • Performance Modifiers





Foam is a Problem

Excess foam can create a variety of challenges, all detrimental to pulp processing: increased maintenance costs, lost capacity, reduced efficiency and longer processing time. The solution: silicone foam control products from Dow.

Innovative, High-Quality Products

Dow features an extensive range of silicone antifoams for use in sulfite and Kraft pulp stock washing. For both hardwood and softwood manufacturing

processes, Dow products provide innovative, effective antifoaming solutions considering drainage and carry-over.

Superior Performance Over Oil-Based Products

- Low usage levels
- Improved washing efficiency and drainage for cleaner pulp
- Reduced need for bleaching chemicals
- Improved persistence and knockdown
- Can be used as a booster

Worldwide Availability

Dow's extensive range of quality products for sulfite and Kraft pulp stock washing meets defoaming challenges in different geographies around the world. Our product range extends from intermediates to high-quality antifoam compounds.



Brownstock Antifoam Product Line

Ready-to-Use Emulsions

Enable rapid entry into new markets with fully formulated water-based emulsions that are both ready to use and easy to disperse in aqueous systems.

Ready-to-Dilute Emulsions

Create lower-active-content emulsions from high content emulsions that are easy to dilute with either tap water or deionized water.

Easy-to-Disperse Concentrates

Enable development of advanced custom aqueous emulsions with mid-viscosity concentrates that are easy to formulate in diluted emulsions by simply adding, with moderate agitation, into preserved and thickened water.

To-Be-Formulated Compounds

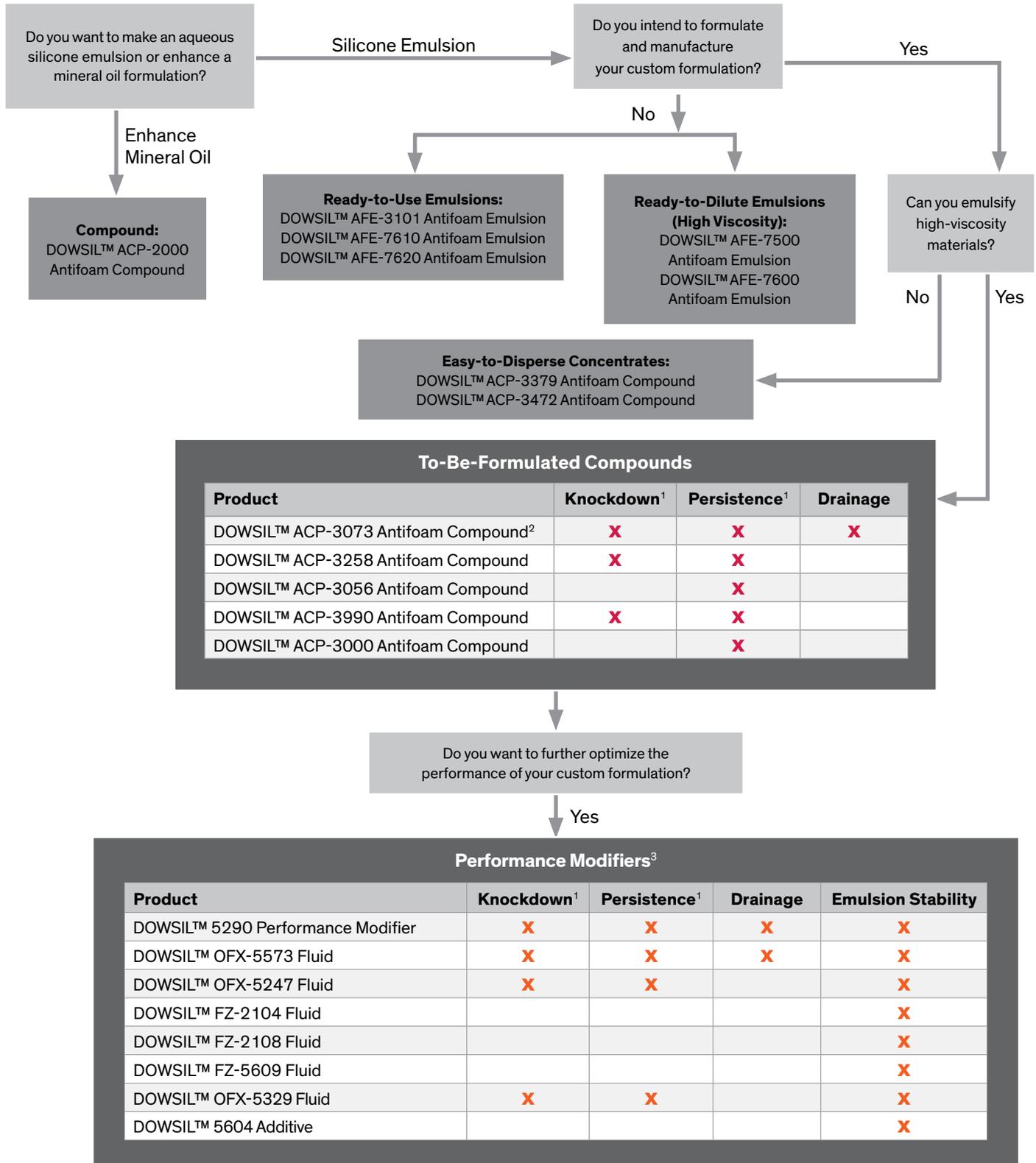
Enable development of advanced custom aqueous emulsions with a full suite of compounds from Dow, both to create a unique competitive advantage and to address customer needs.

Performance Modifiers

Enhance the stability, knockdown, persistence and drainage of antifoam emulsions with silicone polyether (SPE) performance modifiers from Dow. These materials are increasingly popular for use in pulp antifoam formulations and can improve the performance of mineral oil antifoams.



Antifoam Product Selector



¹Blending of materials is appropriate to optimize knockdown and persistence of custom formulations.

²Latest compound technology developed with enhanced drainage.

³Other FDA 21 CFR 176.210-compliant and BFR XXXVI-compliant performance modifiers are available, although their impact on performance is unknown.

Antifoam Properties

Product	Features/Recommended Applications	Viscosity, cp	Product Performance Characteristics ⁴			Active Content
			Knockdown	Persistence	Drainage	
Ready-to-Use Emulsions						
DOWSIL™ AFE-3101 Antifoam Emulsion ⁵	Ready to use; proven in brownstock washing applications; low viscosity allows easy handling and accurate dosing; recommended for all "high foaming" softwood black liquors	700	★★★★★	★★★★	★★★★	20%
DOWSIL™ AFE-7610 Antifoam Emulsion	Highly efficient antifoam and defoamer at low concentration levels; immediate foam-control action; very good persistence in high-temperature and highly alkaline conditions	50-500	★★★★★	★★★★★	★★	10%
DOWSIL™ AFE-7620 Antifoam Emulsion	Highly efficient antifoam and defoamer at low concentration levels; immediate foam-control action; very good persistence in high-temperature and highly alkaline conditions	450	★★★★★	★★★★★	★★	20%
Ready-to-Dilute Emulsions						
DOWSIL™ AFE-7500 Antifoam Emulsion ⁵	Easy dilution with either tap water or demineralized water to produce stable, lower-solids emulsions; recommended for both hardwood and softwood black liquors	200,000	★★★★★	★★★★★	★★	56%
DOWSIL™ AFE-7600 Antifoam Emulsion	Concentrated emulsion designed for easy dilution with either tap water or demineralized water to produce stable, lower-solids emulsions; highly efficient antifoam and defoamer at low concentration levels; immediate foam-control action; persistent foam-control action	N/A	★★★★★	★★★★★	★★	56%
Easy-to-Disperse Concentrates						
DOWSIL™ ACP-3379 Antifoam Compound ⁵	Easy to formulate; robust technology with good dilution stability; suitable for a wide range of foaming mediums	6,000-18,000	★★★★★	★★★★	N/A	N/A
DOWSIL™ ACP-3472 Antifoam Compound ⁵	Easy to formulate; robust technology with good dilution stability; suitable for a wide range of foaming mediums	15,000-30,000	★★★★★	N/A	N/A	N/A
To-Be-Formulated Compounds						
DOWSIL™ ACP-3073 Antifoam Compound ⁵	Low use levels compared to mineral-oil-based defoamers; Excellent foam knockdown and persistence at low use levels; improved drainage in pulp application	20,000-50,000	★★★★★	★★★★★	★★★★★	N/A
DOWSIL™ ACP-3258 Antifoam Compound ⁵	Low use levels compared to mineral oil defoamers; very good foam knockdown and persistence at low use levels; recommended for both hardwood and softwood black liquors	20,000-40,000	★★★★★	★★★★★	★★	N/A
DOWSIL™ ACP-3056 Antifoam Compound ⁵	Provides good persistence in aggressive foaming environments at low dosage concentrations; recommended for softwood black liquors	45,000	★★	★★★★	★★★★	N/A
DOWSIL™ ACP-3990 Antifoam Compound ⁵	Easy to emulsify; provides very good knockdown performance in all foaming environments	35,000	★★★★★	★★	★★	N/A
DOWSIL™ ACP-3000 Antifoam Compound ⁵	Can be emulsified at a wide range of concentrations; provides both good knockdown and persistence performance in aggressive foaming environments; recommended for softwood liquors	10,000-25,000	★★★★	★★★★	N/A	N/A
DOWSIL™ ACP-2000 Antifoam Compound ⁵	Antifoam dispersion for mineral oils; improves persistence of oil-based defoamers; allows effective foam-control performance at lower overall dosages	1,000-4,000	★★★★★	★★★★	N/A	N/A

Specification Writers: These values are not intended for use in preparing specifications. Please contact your local Dow sales office or your Global Dow Connection before writing specifications on these products.

⁴Performance rated on a scale of 1 to 5 stars, with higher numbers signifying increasingly better performance:

- ★★ Acceptable performance, but not primary strength
- ★★★ Good performance, but not primary strength
- ★★★★ Very good, reliable overall performance
- ★★★★★ Excellent; highly recommended

⁵Meets the regulatory requirements of FDA 21 CFR 176.210 and BfR XXXVI.

Performance Modifier Properties

Product ⁶	% Siloxane	% EO	% PO	Molecular Weight	Viscosity, cSt	HLB-EO
DOWSIL™ 5290 Performance Modifier	19	35	46	45,000	17,000	3.4
DOWSIL™ OFX-5573 Fluid	19	35	46	58,000	4,450	6.3
DOWSIL™ OFX-5247 Fluid	18	35	46	27,900	2,300	5.7
DOWSIL™ FZ-2104 Fluid	58	42	0	10,000	1,000	14 ⁷
DOWSIL™ FZ-2108 Fluid	54	16	30	47,100	20,000	7 ⁷
DOWSIL™ FZ-5609 Fluid	74	8	18	23,200	3,000	4 ⁷
DOWSIL™ OFX-5329 Fluid	53	47	1	3,000	360	6.7
DOWSIL™ 5604 Additive	24	50	26	6,700	300	7.7

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LET'S TALK

Whether you need industry-leading innovation or greater cost efficiency, Dow can help. Solutions from Dow are dedicated to meeting your needs for specialty materials, collaborative problem-solving and innovation support. Learn how we can help you at [consumer.dow.com](https://www.consumer.dow.com).

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