

Control Foam And Improve Dehazing with SAG™ Silicone Antifoams for Use with Diesel Fuels

Diesel fuels tend to create foam as they are transferred into vehicle tanks or canisters. As a result, the delivery pump nozzle may receive a false indicator that the tank is full due to foam being generated causing the nozzle to shut off early. This can lead to an increase in refueling time (as the operator waits for the foam to dissipate) and potential overflow and spillage of fuel.

Unwanted foams which are pervasive in the oil and gas industry, may be controlled cost-effectively with SAG silicone antifoams. These organically-modified silicone polymers can help prevent foam formation or knock down generated foams, and can also enhance the dehazing performance of diesel additive packages through improved water separation.

KEY FEATURES AND TYPICAL BENEFITS:

- Enables fast and virtually complete filling of fuel tanks
- Cost-effective, quick foam control and dehazing in diesel fuels
- Effective at very low dose rates
- Performs in the presence of small quantities of water and may improve the clarity of diesel fuel through enhanced dehazing performance
- Improves storage stability for diesel fuels
- Compatibility in many diesel additive packages

SAG ANTIFOAMS FOR DIESEL FUELS

Product	% Actives	Solvent	% Silicon (as received)	% Silicon (actives basis)	Typical Viscosity (cPs)	Product Use
SAG TP-645 antifoam	80	Solvesso 150 ND aromatic fluid	9.5-12.5	11.9-15.6	500	Wet and dry fuel, strong dehazing
SAG TP-325 antifoam	50	DPG	7.8-10.0	15.6-20.0	400	Wet and dry fuel
SAG TP-317 /TP-345 antifoam	50	DPG	7.0-8.2	14.0-16.4	450	Dry fuel, lower cost
SAG TP-367 antifoam	50	2-EH	8.5-12.0	17.0-24.0	150	Wet and dry fuel, lower cost
SAG TP 325 OTL antifoam	100	None	15.6-20.0	15.6-20.0	1500	Wet and dry fuel, high actives
SAG TP-735 antifoam	80	Solvesso 150 ND aromatic fluid	8.5-11	10.1-12.9	750	Wet and dry fuel, dehazer synergies, good cost performance
SAG TP-745 antifoam	100	None	11.0-13.0	11.0-13.0	1200	Wet and dry fuel, strong dehazing, improved cost performance

SAG SILICONE ANTIFOAMS

TEST PERFORMANCE DATA

Antifoams performance results: (representative results are based on BNPe rig test in a standard reference diesel fuel with additive package)

Example 1:

B7* + Antifoam	Antifoam (wt. %)	Foam Volume (ml.)	Foam Collapse Time (s)
No antifoam	-	92	57.3
SAG TP-325 antifoam	50	58	7.2
SAG TP-325 OTL antifoam	100	56	6.8
SAG TP-645 antifoam	80	50	8.3
SAG TP-745 antifoam	100	56	10.8
SAG TP-735 antifoam	80	46	2
SAG TP-345 antifoam	50	44	17.2
Competitive antifoam 1	80	60	8.3
Competitive antifoam 2	80	61	6.2

Note: Test data. Actual results may vary.

*B7 is composed by 7% biodiesel and 93% mineral diesel.

Fuel Treat Rate: 200 ppm Aromatic Additive Package, includes 5 ppm antifoam actives.

Example 2:

B7* + Antifoam	Antifoam (wt. %)	Foam Volume (ml.)	Foam Collapse Time (s)
No antifoam	-	98	54
SAG TP-325 antifoam	50	89	13.6
SAG TP-325 OTL antifoam	100	79	12.1
SAG TP-645 antifoam	80	61.3	8.9
SAG TP-745 antifoam	100	84	13.4
SAG TP-735 antifoam	80	52	1.8
SAG TP-345 antifoam	50	86	12.4
Competitive antifoam 1	80	104	11.8
Competitive antifoam 2	80	84	10.9

Note: Test data. Actual results may vary.

*B7 is composed by 7% biodiesel and 93% mineral diesel.

Fuel Treat Rate: 1000 ppm Cetane Additive Package, includes 5 ppm antifoam actives.

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DEHAZING PERFORMANCE RESULTS:

(Representative results are based on ASTM guided test in a standard reference diesel fuel with additive package)

B7* + Antifoam	Dehazer	Separation Time - 15 ml (s)	Separation Time - 20 ml (s)	Emulsified Aqueous Layer - 300 s (ml.)	Rating - 300 s			
					Fuel Haze	Water Haze	Interface	Separation
-	-	900	900	5-8	1-2	1	3-4	3
-	Competitive organic	98	194	0	1	1	1b	2
SAG TP-325 antifoam	-	195	826	1-2	1-3	1	3	3
SAG TP-325 OTL antifoam	-	101	218	0-1	2	1	1b-2	2
SAG TP-645 antifoam	-	53	169	0	2-3	1	1b-2	2
SAG TP-745 antifoam	-	75	200	0	1-3	1	1b-2	2
SAG TP-735 antifoam	-	900	900	12.5	6	1	2	2
SAG TP-345 antifoam	-	86	321	0-1	6	1	2	2
Competitive antifoam 1	-	900	900	8	2-3	1	3-4	3
Competitive antifoam 2	-	900	900	9	2-5	1	3-4	3

Note: Test data. Actual results may vary.

*B7 is composed by 7% biodiesel and 93% mineral diesel.

Fuel Treat Rate: 200 ppm Aromatic Additive Package, includes 5 ppm antifoam actives.

SAG SILICONE ANTIFOAMS

GENERAL CONSIDERATIONS FOR USE

SAG silicone antifoams may be used as received or after dilution in appropriate solvent(s) and are typically dosed at between 2 and 15 ppm in the final diesel fuel, depending on the propensity of the system to foam.

Testing to determine the optimum dosage is recommended, with 5 ppm of antifoam, as received, is a typical starting point.

SAG silicone antifoams are best stored at temperatures between 0 °C and 40 °C to facilitate ease of handling, but storage at lower or higher temperatures (within a reasonable range) should not impact subsequent defoaming performance in most additive packages.

CONTACT INFORMATION

For product prices, availability, or order placement, contact our customer service by visiting www.momentive.com or emailing commercial.services@momentive.com



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