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TECHNICAL DATA SHEET

Siltech® P-982

High Efficiency Antifoam Compound

DESCRIPTION

Siltech P-982 is a High Efficiency High Durability Antifoam Compound. Siltech P-982 is approved by the EPA for use in agricultural formulations under 40 CFR 180.910.

TYPICAL PROPERTIES

Appearance	Opaque White Liquid
Viscosity, cPs	14,000
Active Content, %	100
Water Solubility	Dispersible at Dilute Concentrations

USES AND APPLICATION

Siltech P-982 is especially formulated to provide knockdown of foam (defoaming) as well as durable prevention of reforming foam (antifoaming) over time in highly alkaline environments such as pulp and paper, textile and laundry applications.

This product was developed with an internal testing apparatus to mimic the industrial process which is typical of the recirculating systems used in the pulp and paper industry. A solution of natural or synthetic black liquor is charged into the apparatus, heated to a target temperature and recirculated. When the foam height builds to a target level (2000 mL), the foam control agent is injected (time=0 Sec). Foam height is recorded with time.

We did do some developmental comparisons with natural black liquor samples, with similar findings. However, natural black liquors are notorious for behaving differently depending on the part of the world and type of tree they are from, etc. Consequently, we rely more on freshly prepared synthetic black liquor for comparison. Our formula is shown in Table 1.

Table 1: Synthetic Black Liquor Formulation.

Ingredient	Weight Percent
Deionized Water	88.70%
NaOH (50% by wt.)	2.60%
Na ₂ CO ₃ Powder	2.00%
Oleic Acid (0173)	0.16%
Indulin C	4.44%
Table Sugar	2.00%
Resin Acid (Abietic Acid)	0.10%
Total	100.00%

Evaluations were conducted with four products all at 50 ppm of active foam control agent in the recirculating system containing synthetic black liquor at 95°C. Siltech P-982 was compared to Siltech PA-140, another commercial material, as well as two competitive benchmarks. The competitive benchmarks are well known products marketed for pulp and paper.

The chart (Figure 1) below shows the first 50 seconds of data collected. Here one can clearly see the much superior knockdown performance of the Siltech P-982. Especially at 5 and 10 seconds after introduction of the agent the difference is dramatic.

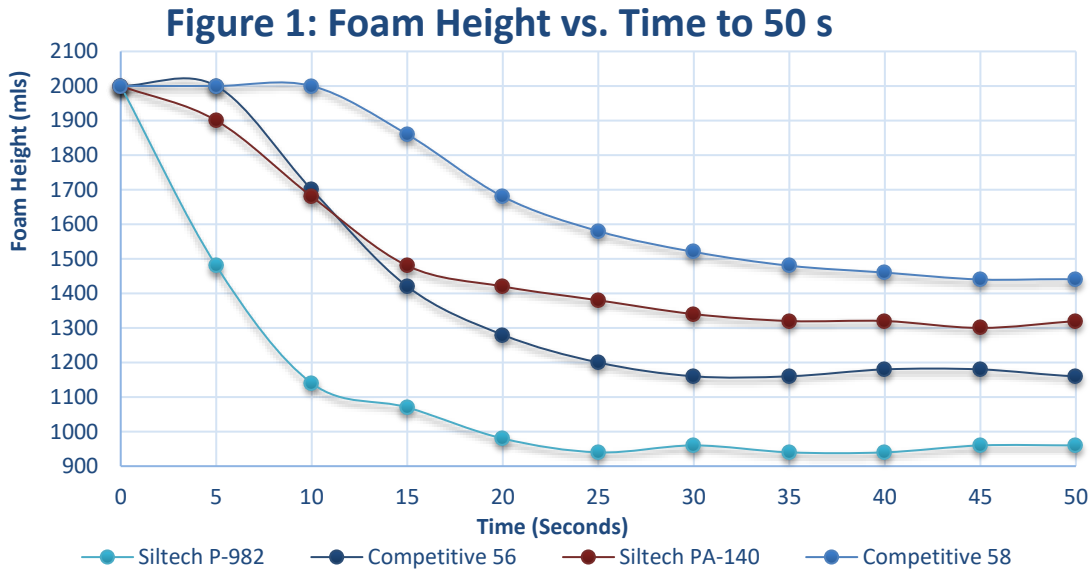
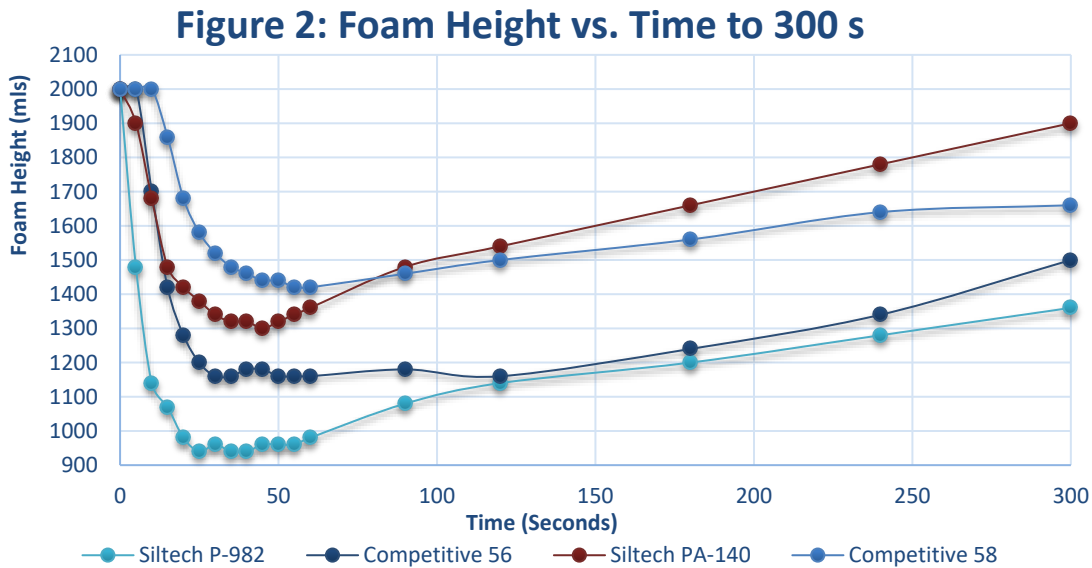


Figure 2 shows the data collected out to 300 seconds. In that time frame the high pH and temperature of this solution begins to decompose the antifoam molecules. One can especially see the loss of performance of the less durable Siltech PA-140 which crosses over the Competitive 58 at about 75 seconds in this extreme environment.

Siltech P-982 continues to maintain better antifoam performance over the competitive benchmarks with a similar durability over time.



In more forgiving environments, this high level of durability may not be critical but Siltech P-982 is still very effective. In the systems where durability is not paramount, the defoaming and antifoaming performance is more efficient than standard antifoam products in terms of use level and performance.

SAFETY

Before handling, read the Material Safety Data Sheet and container label for safe use, physical and health hazard information.

THIS MATERIAL IS NOT FOR MEDICAL OR DRUG USE.

STORAGE AND SHELF LIFE

When stored in the original, unopened containers between 10 and 40⁰C, **Siltech P-982** has a shelf life of 12 months from date of manufacture.

PACKAGING

Siltech P-982 is available in 20kg and 200kg containers.

LEGAL DISCLAIMER

Siltech Corporation believes that the information in this technical data sheet is an accurate description of the typical uses of the product. Siltech Corporation, however, disclaims any liability for incidental or consequential damages, which may result from the use of the product that are beyond its control. Therefore, it is the user's responsibility to thoroughly test the product in their particular application to determine its performance, efficacy and safety. Nothing contained herein is to be considered as permission or a recommendation to infringe any patent or any other intellectual property right.

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