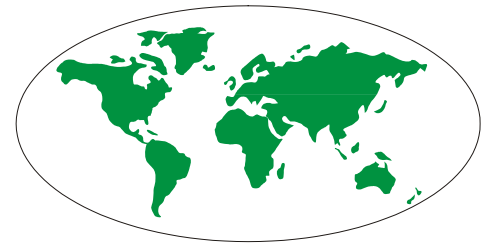


SURTECH 20-113

A versatile cost-effective hydrotrope-surfactant for alkaline cleaning products



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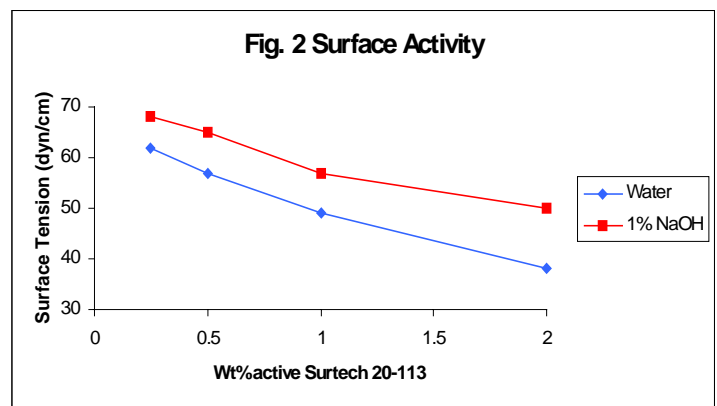
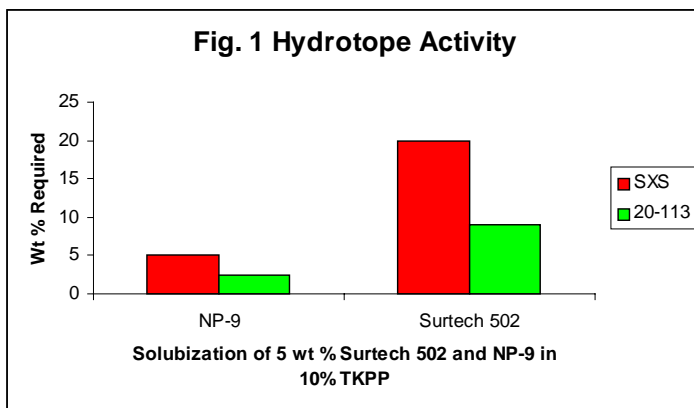
Surtech 20-113 is a chlorine stable, low foaming, hydrotrope-surfactant for alkaline cleaning products. Used primarily as a hydrotrope for nonionic surfactants and solvents in alkaline or high electrolyte formulations, it can often replace a portion of the surfactants, resulting in a reduction of the number of raw materials required, and simplification of the mixing procedure.

Typical Properties	
% active	45
pH	10
Specific gravity	1.06
Appearance	Slightly viscous, colorless to light yellow

Surtech 20-113 is stable to both sodium hydroxide and sodium hypochlorite. When used as the hydrotrope in cleaning formulations, its surface activity typically allows the anionic surfactant concentration in the formula to be reduced without a sacrifice in performance.

Figure 1 shows that on a weight basis, Surtech 20-113 is a much more effective hydrotrope than 40% sodium xylene sulfonate. Surtech 502 is a low foaming, low cloud point surfactant available from SCF.

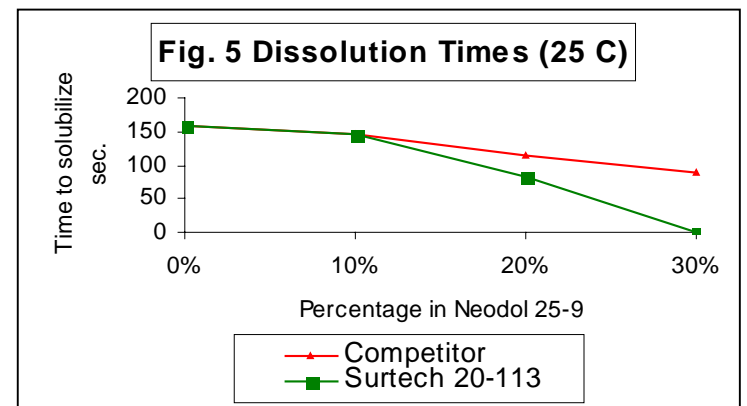
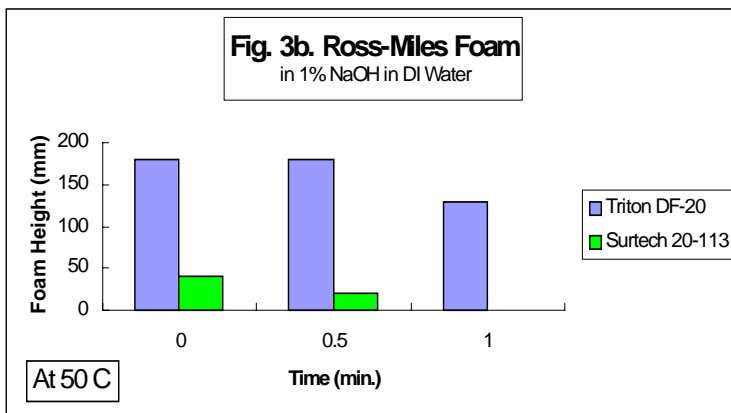
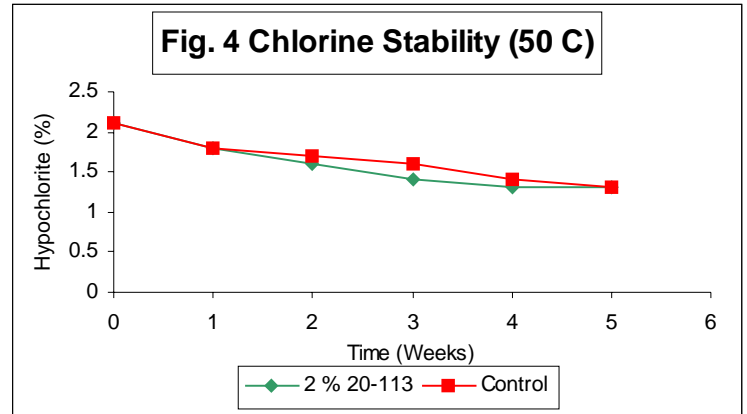
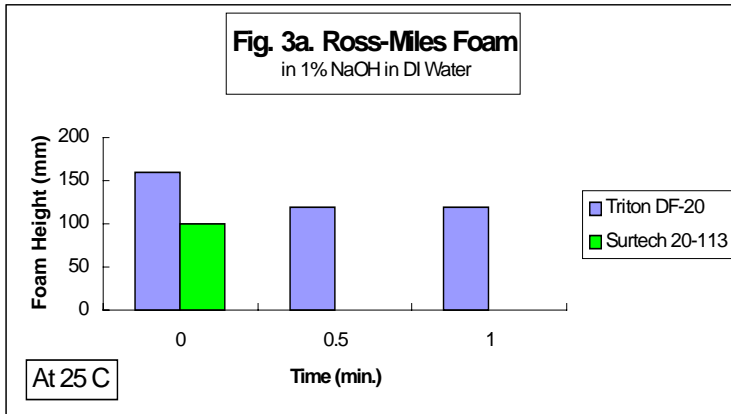
Figure 2 shows the surface tension reduction that is achieved in neutral and in alkaline solutions of **Surtech 20-113**. When **Surtech 20-113** is used as the hydrotrope in cleaning formulations, in many cases this surface activity allows the anionic surfactant concentration in the formula to be reduced without a performance sacrifice.



Surtech 20-113 is a low foaming surfactant. Low levels of unstable foam are generated under conditions of high agitation. The results from Ross-Miles foam tests comparing **Surtech 20-113** with Triton DF-20 at 25° and 50° C are shown in Figures 3a. and 3b. The surfactants are present at 0.1% active basis.

An important feature of **Surtech 20-113** is its stability to hypochlorite. Figure 4 illustrates the loss of chlorine in a solution containing **Surtech 20-113** and 0.5% NaOH at 50° C.

Figure 5 shows that **Surtech 20-113** added to an ethoxylated alcohol (Neodol 25-9) decreases viscosity, and speeds the dissolution by preventing gel formation on addition of the mixture to water.



Handling Precautions

Surtech 20-113 is a slight irritant. Rubber gloves and safety goggles are required. Body-protective clothing and shoes are required. Eye-wash fountains and safety showers in the work area are required. See the Surtech 20-113 Material Safety Data Sheet for detailed health and safety information.

The information given herein is correct to the best of our knowledge. However, no warranty is expressed or implied regarding its accuracy or the results to be obtained from the use thereof and users should make their own tests to determine the suitability of these products for their own particular purpose. No statement in this brochure/leaflet is intended or should be construed as a recommendation to infringe any existing patent.

Surface Chemists of Florida, Inc.
 1303 Park Lane South • Jupiter, FL 33458
 Tel. (561) 745-8774 • Fax (561) 745-8737
www.surfacechemists.com