

## DeTROPE SA-45

**DeTROPE SA-45** is a 45% active sodium alkanoate in water. This anionic surfactant is a highly effective, multifunctional, low foam hydrotrope recommended for use in cleaners at pH above 7. It is chlorine stable and also exhibits wetting and corrosion inhibition properties.

### SPECIFICATIONS

Appearance @ 25°C:	Clear, water white liquid
Color (Gardner):	1 max.
% Activity:	45.0 +/- 1.5%
pH (as-is):	10.0+/- 1.0

**SOLUBILITY** DeTROPE SA-45 is soluble in water, alcohols and glycols. It is insoluble or dispersible in oils and solvents. It is also soluble in 10% sodium hydroxide, 20% potassium hydroxide, and in a variety of other electrolytes such as silicates, phosphates and carbonates.

### TYPICAL PROPERTIES

Density @ 25°C                      ~1.05 g/ml

- Excellent hydrotrope
- Chlorine stable (up to 5% active NaOCl)
- Excellent solubilizer for nonionics in alkaline and electrolyte systems
- Excellent alkali and electrolyte stability
- Contributes wetting properties
- Approved for use as inert in non-food pesticide formulations
- Readily Biodegradable
- Non-phenolic
- Practically non-foaming
- Provides corrosion inhibition on steel

### APPLICATIONS

- Alkaline cleaners & detergents
- Low foam alkaline systems
- High pressure alkaline spray wash
- Chlorine based cleaners
- Automatic dish liquids & detergents
- High pressure metal cleaner
- Low foam spray vac detergents
- Low foam metal cleaners
- Textile mercerizing
- Industrial detergents
- Pesticide formulations

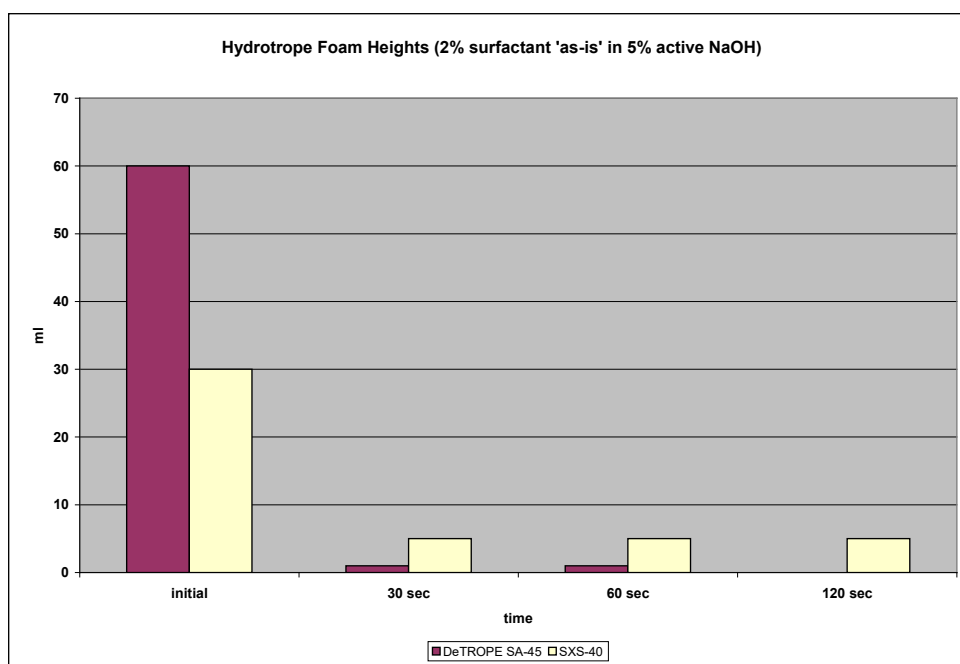
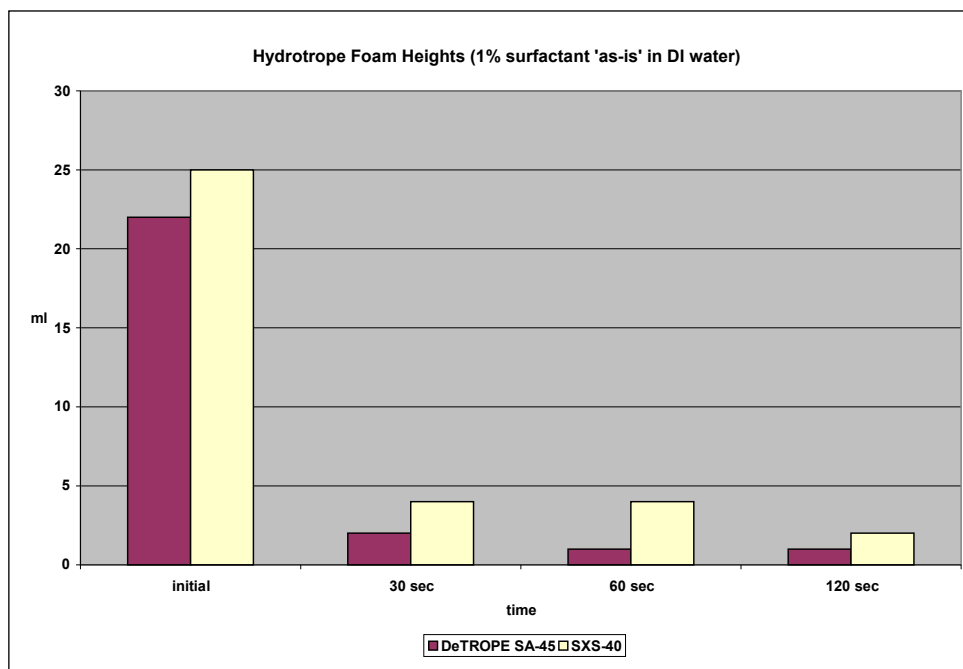
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### Foam Height Properties of DeTROPE SA-45

The foaming properties of DeTROPE SA-45 were determined via modified Ross-Miles, graduated cylinder shake test. The foam heights are presented in the following charts compared to sodium xylene sulfonate (SXS-40) and are reported as millimeters of foam present initially, at 30 seconds, at 60 seconds and after 2 minutes.



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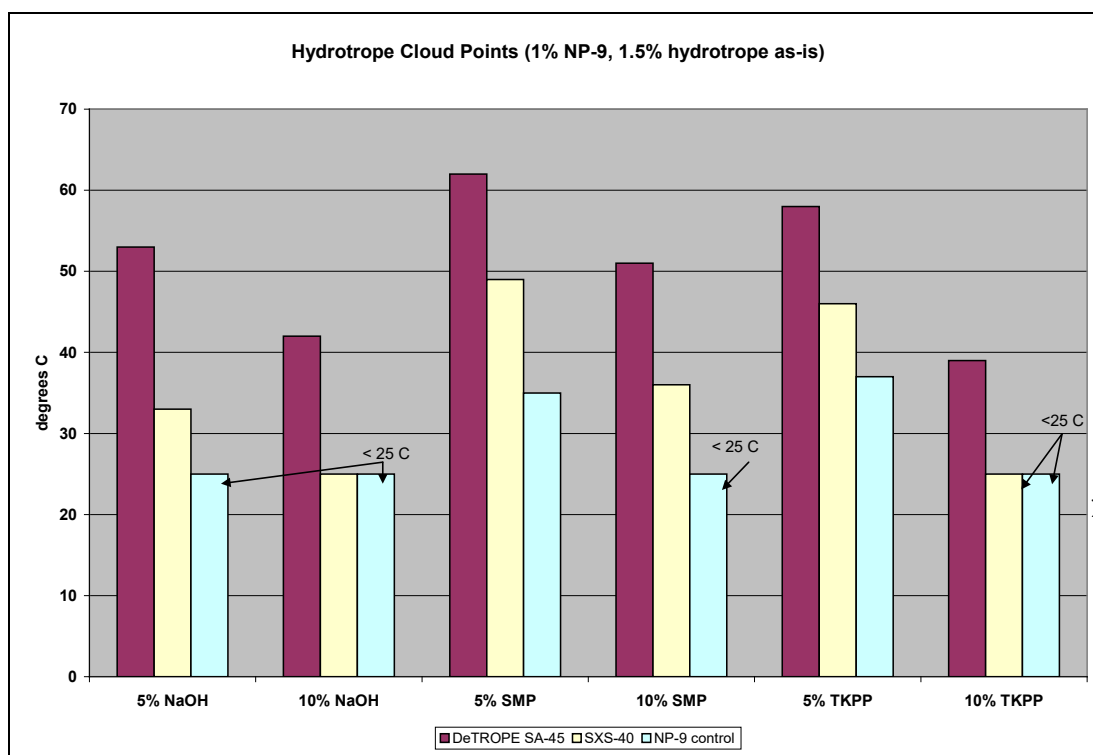
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### **Hydrotrope Cloud Point Properties of DeTROPE SA-45** (continued)

To determine hydrotrope capabilities, a series of cloud point tests were performed. The hydrotrope was solubilized in caustic or alkaline electrolyte solution to which a 9.5 mole nonyl phenol was added. Each sample was heated to the temperature at which the NPE-9.5 clouds out of solution. The higher the cloud point temperature, the more efficient the hydrotrope.

The control is 1% NPE-9.5 in each alkaline electrolyte solution without hydrotrope added. The hydrotrope capabilities of DeTROPE SA-45 at higher levels of NP-9.5 show similar trends (data available on request).



#### **Key:**

NaOH = Sodium Hydroxide  
SMP = Sodium Metasilicate Pentahydrate  
TKPP = Tetrapotassium Pyrophosphate  
SXS-40 = Sodium Xylene Sulfonate 40% active

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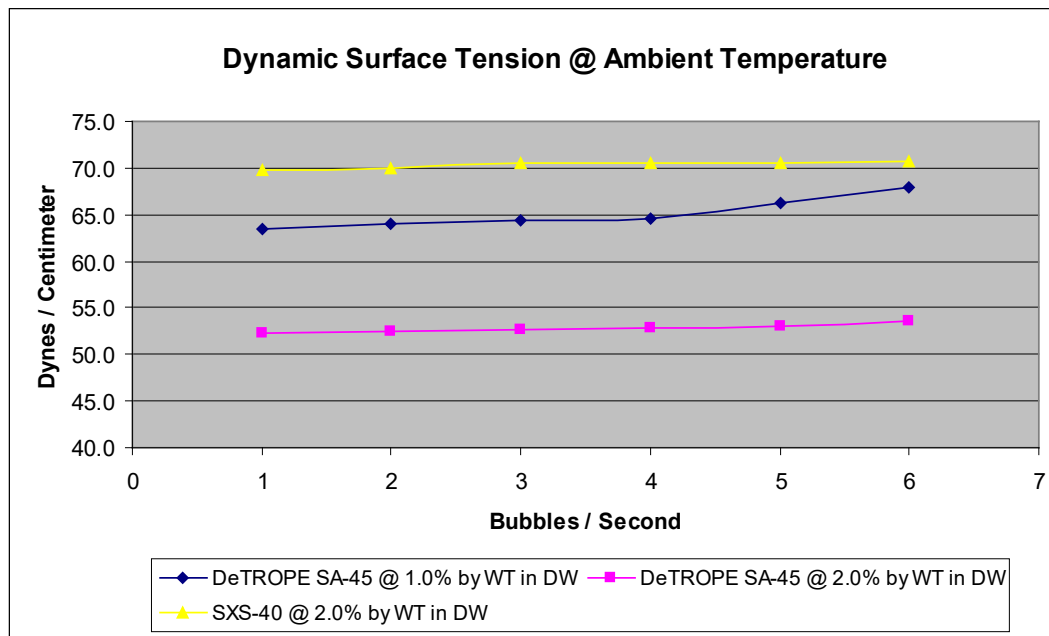
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### Dynamic Surface Tension of DeTROPE SA-45

Dynamic surface tension was conducted at 1.0% and 2.0% by weight in distilled water at ambient temperature. DeTROPE SA-45 provides considerably lower surface tension as compared to SXS-40.

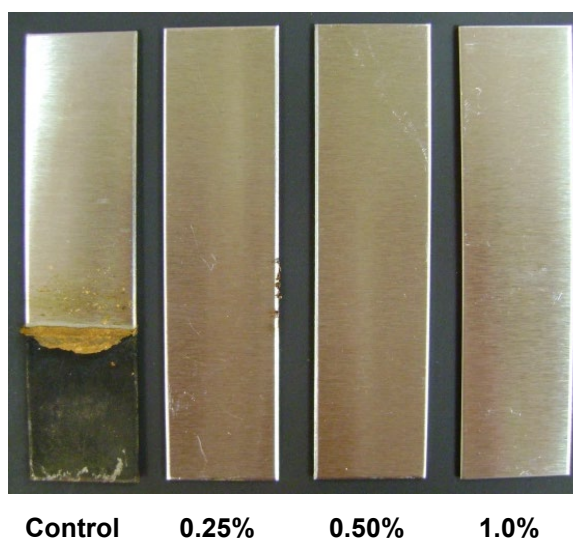


### Corrosion Inhibition Properties of DeTROPE SA-45

Metal coupons were partially submerged in a solution containing from 0.25% - 1.0% by weight of DeTROPE SA-45 in hard water (100ppm as CaCO<sub>3</sub> and 71ppm as CaCl<sub>2</sub>) and stored in sealed glass jars at room temperature. The top halves of the panels were exposed to the vapor phase.

#### 90 Day Results

Steel Panels:  
Q-Panel – Type RS  
Low carbon, cold-rolled steel  
0.063" thick, ½ hard



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