

DeTROPE CA-100

DeTROPE CA-100 is a low foaming, anhydrous, anionic mixed-amine carboxylate. It is an excellent hydrotrope for use in aqueous and powdered alkaline systems and is an effective corrosion inhibitor for aluminum and steel in aqueous systems above pH 7.0.

For easier handling at colder temperatures, a 90% active version is available as **DeTROPE CA-90**.

SPECIFICATIONS

Appearance @ 25° C:	Clear amber viscous liquid
Color (Gardner):	12 max.
pH (1% in D.W.):	6.2 - 7.5

SOLUBILITY DeTROPE CA-100 is soluble in water, alcohols and glycols. It is insoluble or dispersible in most solvents and oils.

TYPICAL PROPERTIES

	DeTROPE CA-100	DeTROPE CA-90
% Activity	99% min.	90% min.
Density @ 25°C	~1.0 gm/ml	~1.0 gm/ml

- Excellent liquid hydrotrope for use in aqueous alkaline cleaners
- DeTROPE CA-100 is suitable for powdered alkaline detergents
- Excellent wetting properties in alkaline formulations
- Corrosion inhibitor for aluminum and steel in aqueous systems at pH \geq 7
- Recommended use level (0.25 – 0.5%)
- Moderate hard water stability
- Low, quick breaking foam
- Good alkaline electrolyte tolerance
- Does not leave solid or waxy residue upon drying
- Biodegradable, non-phenolic, phosphate-free
- Provides lubricity in aqueous systems

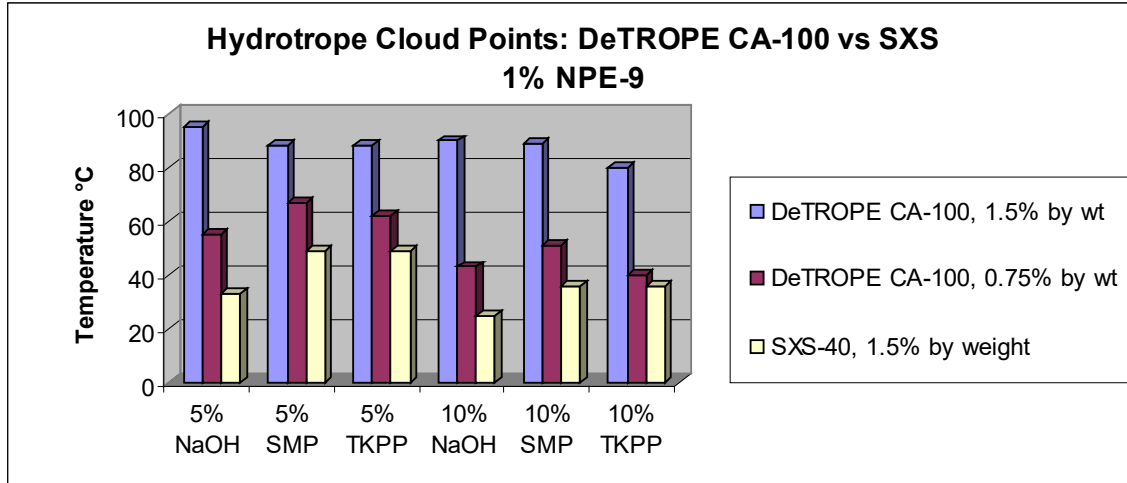
APPLICATIONS

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| <ul style="list-style-type: none"> • Powdered alkaline detergents • Synthetic coolants and cutting fluids • Low foam caustic cleaners • Aerosol formulations • Water soluble lubricants • High pressure alkaline detergents | <ul style="list-style-type: none"> • Alkaline metal cleaners • Water based paints and coatings • Metal working fluids • Synthetic cutting fluids • Mechanical dishwashing detergents • Hard surface cleaners |
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DeTROPE CA-100 Hydrotrope Data

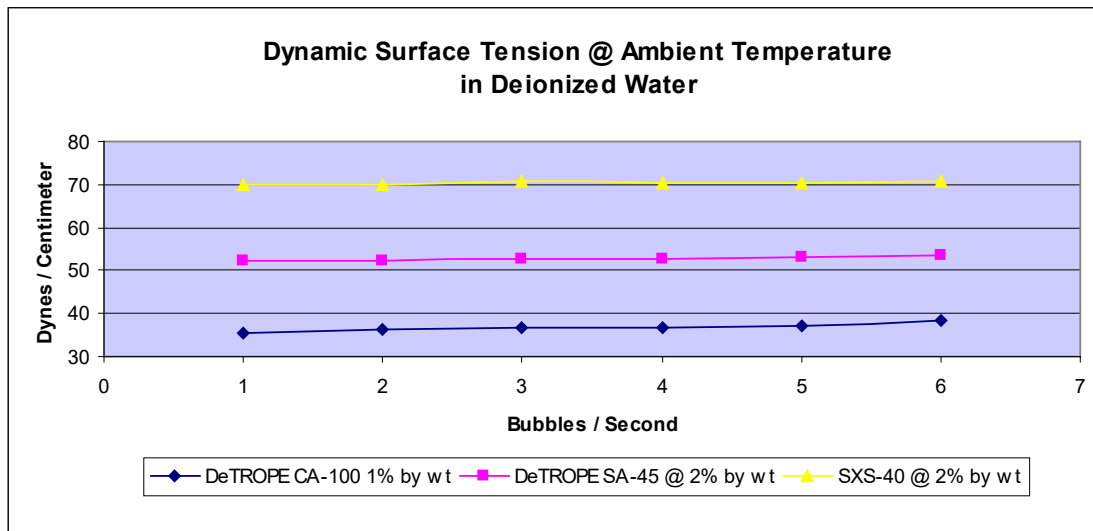
Hydrotrope capabilities were determined in a series of cloud point tests. The hydrotrope was solubilized in a caustic or alkaline electrolyte solution followed by addition of a 9.5-mole nonylphenol ethoxylate (NPE-9.5). Each sample was heated to the temperature at which the NPE-9.5 clouds out of solution. The graph below depicts the cloud point temperature of each solution. The higher the cloud point temperature, the more efficient the hydrotrope.



Key: NaOH = Sodium Hydroxide, SMP = Sodium Metasilicate Pentahydrate, TKPP = Tetrapotassium Pyrophosphate

Dynamic Surface Tension of DeTROPE CA-100

Dynamic surface tension measurements were conducted on **DeTROPE CA-100** at ambient temperature in deionized water. Compared to SXS-40, **DeTROPE CA-100** provides significantly lower surface tension.



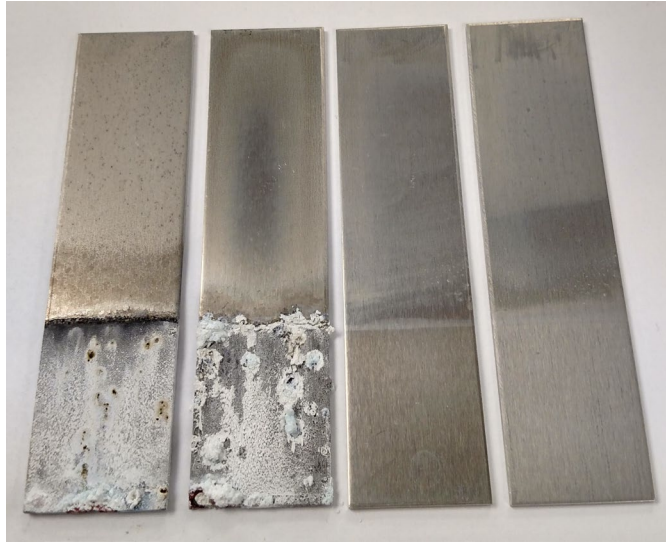
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Panel Submersion Corrosion Testing with DeTROPE CA-100

The bottom half of each metal panel was submerged in solution containing 0.25% - 1.0% by weight of **DeTROPE CA-100** in hard water (100 ppm as CaCO₃ & 71 ppm as chloride) at room temperature. The top half of the panel was exposed to the vapor phase in closed glass containers.

#2024 Bare Aluminum, Tested for 9 months at ambient temperature

No inhibitor **0.25%** **0.50%** **1.0%**



Cold Rolled Steel, (SAE 1010), Tested for 9 months at ambient temperature

No inhibitor **0.25%** **0.50%** **1.0%**

