

# HYDROTROPING FOR HI&I CLEANING

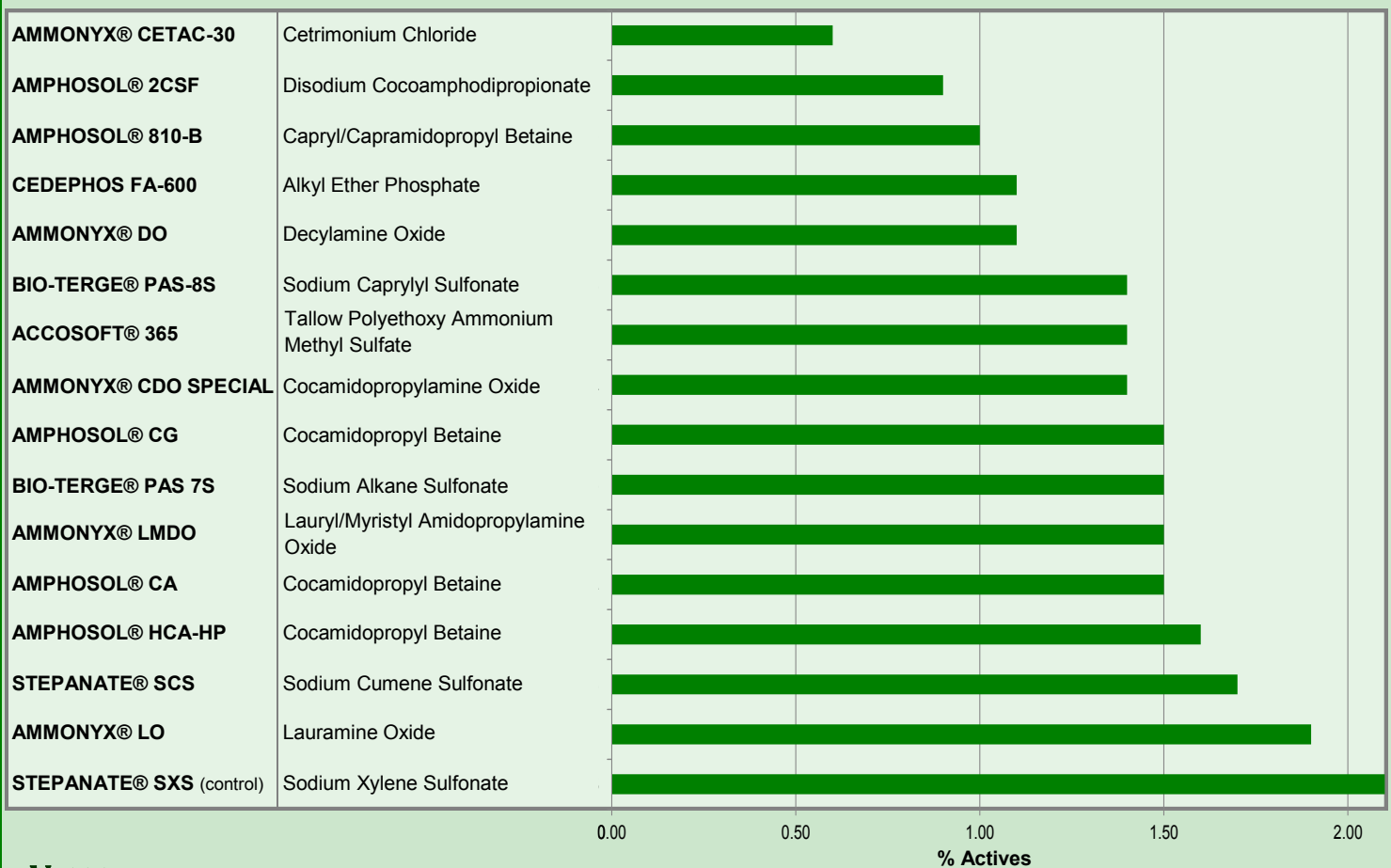
## HYDROTROPING—ELECTROLYTES:

Electrolytes, defined as salts or builders added to cleaning products to enhance detergency, aid in the removal of tough soils but may create a hazy or separated solution. Hydrotroping surfactants improve solubility to produce a clear solution. This sales tool highlights the top 15 hydrotroping surfactants, based on percent actives, that aid in the solubilization of electrolytes.

## TYPICAL APPLICATIONS:

- ◆ Hand and Automatic Dishwash Detergents
- ◆ Industrial Ware Washing
- ◆ Clean-In-Place
- ◆ “Touchless” Car Wash Detergents
- ◆ Degreasers
- ◆ Hard Surface Cleaners

## HYDROTROPING SURFACTANTS FOR ELECTROLYTES



### NOTES:

- ◆ The graph demonstrates the minimum amount of Stepan surfactant required to clarify the formula.
- ◆ To convert from % actives to % by weight, take the % actives (from the graph) and multiply by (100/% Actives of product). Percent actives is available from Stepan’s Certificate of Analysis or Technical Bulletin. Example: STEPANATE SXS is 40% active. Amount required to clarify the formula is 2.1% actives (taken from the graph) x 100/40 = 5.25% by weight.
- ◆ Formula tested contained 6% nonionic surfactant, 6% sodium metasilicate, and 6% tetrapotassium pyrophosphate in deionized water. All values are by weight.
- ◆ All products are stocked at our Joliet, IL packaged warehouse with the exception of ACCOSOFT 365, AMPHOSOL 810-B, AMPHOSOL HCA-HP, and BIO-TERGE PAS 7S.

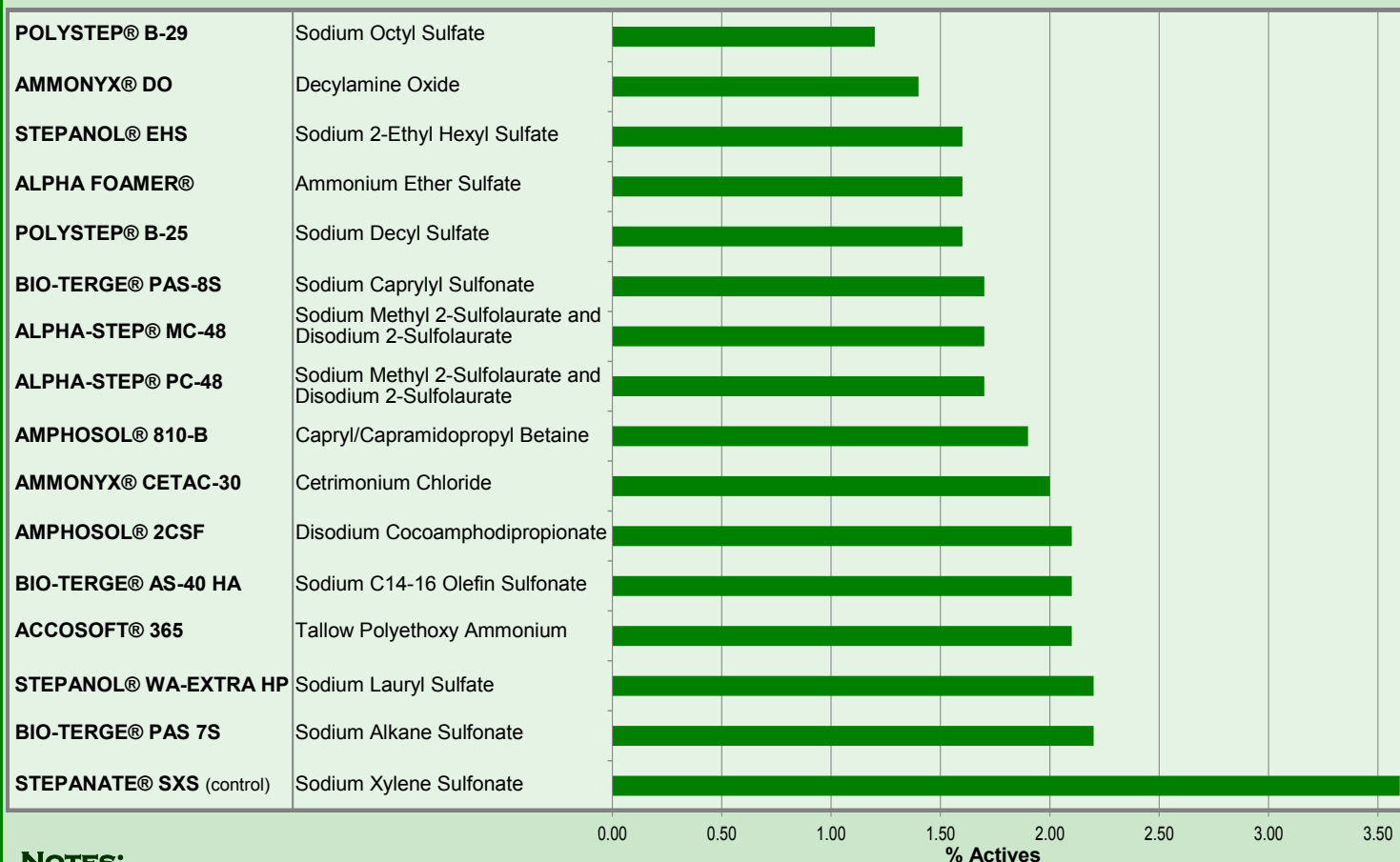
# HYDROTROPING—DISSIMILAR ORGANICS:

Dissimilar organics are defined as nonionic surfactants derived from the same alcohol feedstocks but synthesized with different levels of ethylene oxide. Normally mixed into formulas as a pair with a water soluble (high HLB) component and an oil soluble (low HLB) component, dissimilar organics aid in the removal of tough soils but may create a hazy or separated solution. Hydrotroping surfactants improve solubility to produce a clear solution. This sales tool highlights the top 15 hydrotroping surfactants, based on percent actives, that aid in the solubilization of dissimilar organics.

## TYPICAL APPLICATIONS:

- ◆ Degreasers
- ◆ Metal Cleaning
- ◆ Kitchen Counter Top Cleaners
- ◆ Dilutable Cleaners
- ◆ Janitorial Cleaners
- ◆ Spray & Wipe Cleaner

## HYDROTROPING SURFACTANTS FOR DISSIMILAR ORGANICS



### NOTES:

- ◆ The graph demonstrates the minimum amount of Stepan surfactant required to clarify the solution.
- ◆ To convert from % actives to % by weight, take the % actives (from the graph) and multiply by (100/% Actives of product). Percent Actives is available from Stepan's Certificate of Analysis or Technical Bulletin. Example: STEPANATE SXS is 40% active. Amount required to clarify the formula is 3.6% actives (taken from graph) x 100/40 = 9.0% by weight.
- ◆ HLB - Hydrophilic-lipophilic balance. A low HLB nonionic surfactant has a value ≤ 10. A high HLB nonionic surfactant has a value 11-20.
- ◆ Formula tested contained 0.5% sodium citrate, 2.5% high HLB surfactant, and 2.5% low HLB surfactant in deionized water. All values are by weight.
- ◆ All products are stocked at our Joliet, IL packaged warehouse with the exception of ACCOSOFT 365, AMPHOSOL 810-B, BIO-TERGE AS-40 HA, and BIO-TERGE PAS 7S.

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