

RAPID WETTING

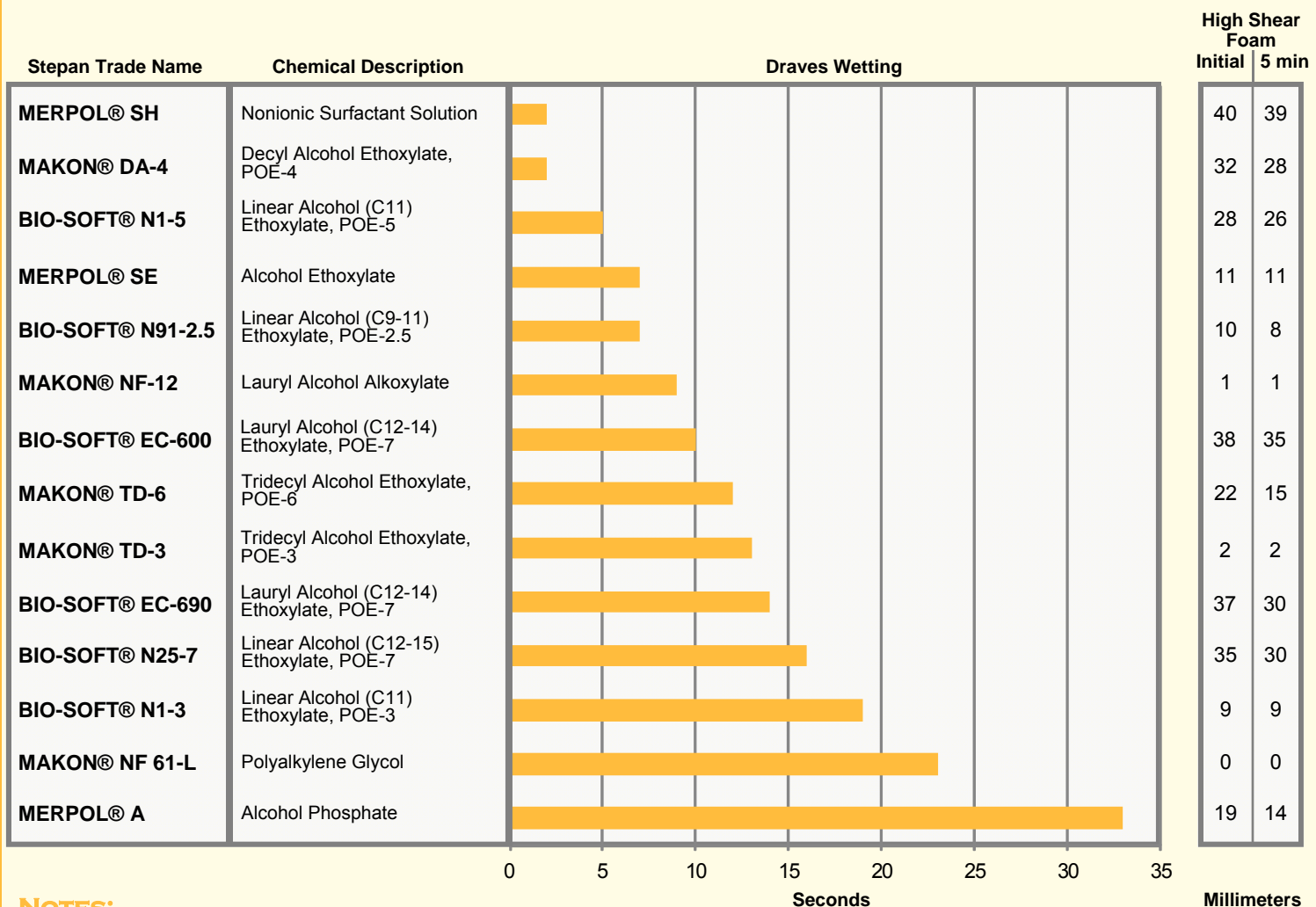
FOR HI&I CLEANING

This sales tool highlights the Stepan surfactants that have rapid wetting. Wetting is an important property of surfactants for hard surface cleaning, and it is defined as the ability of a surfactant solution to spread on a surface, which contributes to rapid cleaning. Quick spreading of a surfactant makes soil removal easier, requiring less time and energy. Surfactants that exhibit fast wetting and low foaming properties are beneficial for certain Institutional & Industrial (I&I) applications since excessive foam is often disruptive to the cleaning process. The following chart highlights the top 14 surfactants that exhibit fast wetting and low foaming properties.

TYPICAL APPLICATIONS:

- ◆ Clean-In-Place (CIP)
- ◆ Machine Floor Scrubbing
- ◆ Ware Washing
- ◆ Rinse Aid
- ◆ Metal Cleaning
- ◆ Industrial & Commercial Laundry

MOST RAPID WETTING / LOWEST FOAMING PRODUCTS

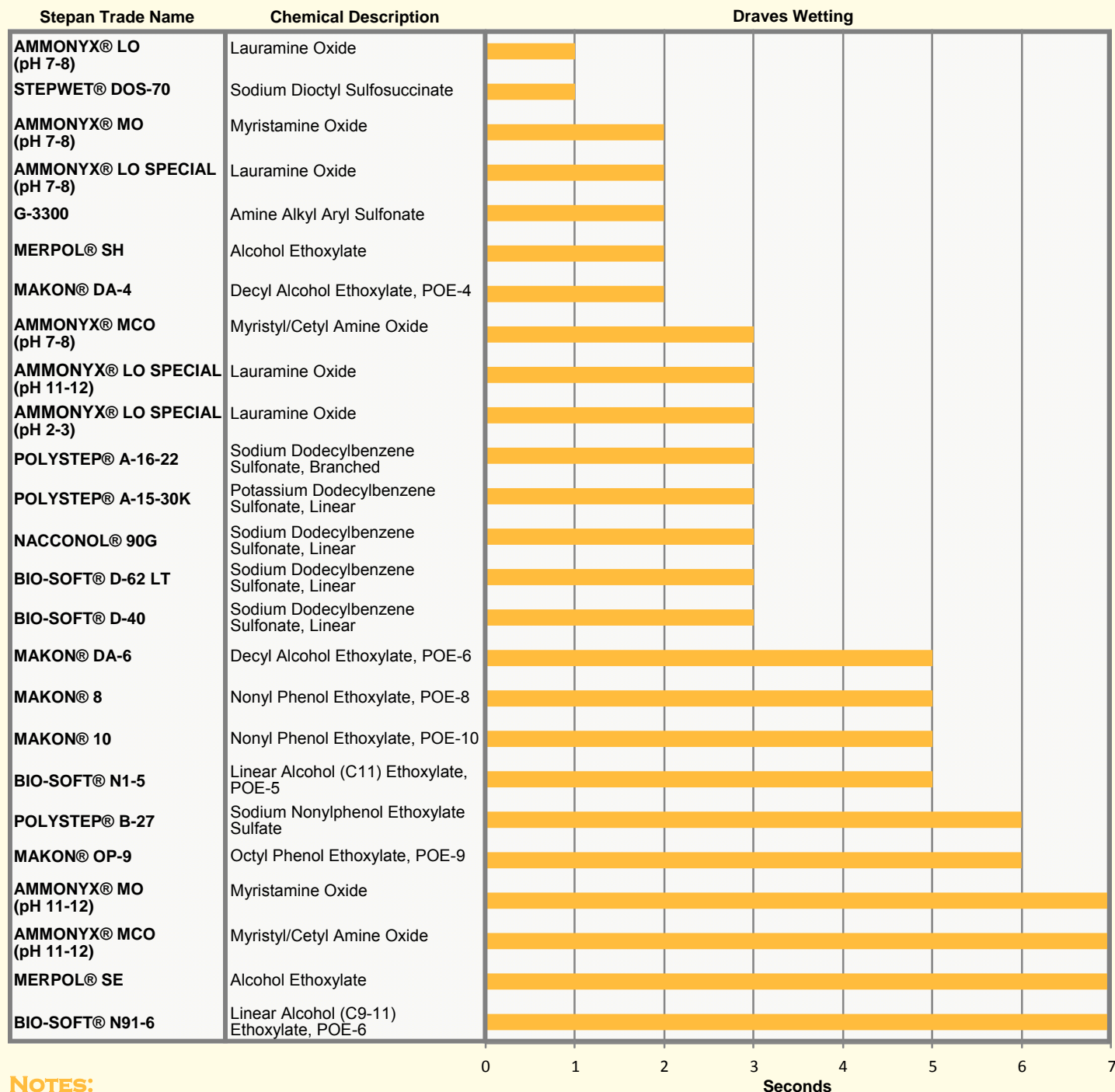


NOTES:

- ◆ Wetting determined by the Draves Wetting Test Method (ASTM D2281-68). Rapid wetting is defined to be ≤ 40 seconds.
- ◆ Foam data determined by the High Shear Foam Height Method (ASTM D3519-88). Low foam is defined to be ≤ 40 mm initial foam.
- ◆ All products are stocked at our Joliet, IL packaged warehouse with the exception of BIO-SOFT® EC-600, MAKON® DA-4, MAKON® NF 61-L, MAKON® TD-3, MAKON® TD-6, and MERPOL® SH.

The following chart highlights the most rapid wetting Stepan surfactants regardless of foam height.

MOST RAPID WETTING PRODUCTS



NOTES:

- ◆ AMPHOSOL® and AMMONYX® were evaluated at acidic, neutral and alkaline pH because the pH may affect their wetting capabilities. All other products were evaluated at neutral pH.
- ◆ Wetting determined by the Draves Wetting Test Method (ASTM D2281-68). Rapid wetting is defined to be ≤ 40 seconds.
- ◆ Please refer to the Stepan Product Selector Guide for Household, Institutional & Industrial Cleaning (HI&I) for wetting data on other Stepan surfactants for the HI&I market.
- ◆ All products are stocked at our Joliet, IL packaged warehouse with the exception of MAKON® DA-4, MAKON® DA-6, MERPOL® SE, and POLYSTEP® A-15-30K.

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