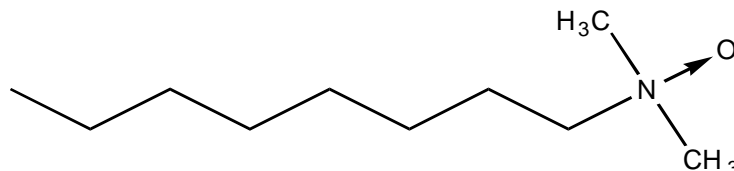


Macat[®] AO-8 Special



Low Foam – Bleach Stable Surfactant

Overview

MACAT AO-8 Special is a modified 30% active octyl (C₈) dimethylamine oxide in water. AO-8 Special is an exceptional low foam wetting and coupling agent that is hypochlorite and alkali stable.

The exceptional performance of MACAT AO-8 Special allows for use in a wide range of markets and applications. AO-8 Special offers broad surfactant compatibility and is an effective coupling agent. **Household Products, Institutional Clean-In-Place Cleaners** formulations economically employ AO-8 Special for superior low foam wetting, detergency, and hypochlorite stability for unique and differentiated product performance.

The exceptional stability and wetting performance of MACAT AO-8 Special in hypochlorite solutions allows for product performance unachievable with other surfactants. Use AO-8 Special in high activity bleaching systems for enhanced cleaning, protein removal and the elimination of mold and mildew stains. Other applications include **Commercial Water Treatment** as a stable non-foaming wetting agent to enhance hypochlorite effectiveness.

MACAT AO-8 Special is readily biodegradable, and contains no solvents or VOCs. AO-8 Special is an efficient lipid solubilizer with an LD₅₀ (Rats) of 3600 mg/kg and at 2.5% active, causes minimal eye irritation.

Typical Properties

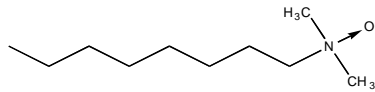
Water solubility.....	Complete
Physical form.....	Liquid
Charge.....	Anionic
Active content.....	29.5% Minimum
Specific gravity (25°C).....	0.98±0.04
pH (10% aq.).....	9.0±1.0
Flash point.....	>200°F (PMCC)
RVOC, U.S. EPA, %.....	0
Shipping.....	Non-Red Label

Handling Information

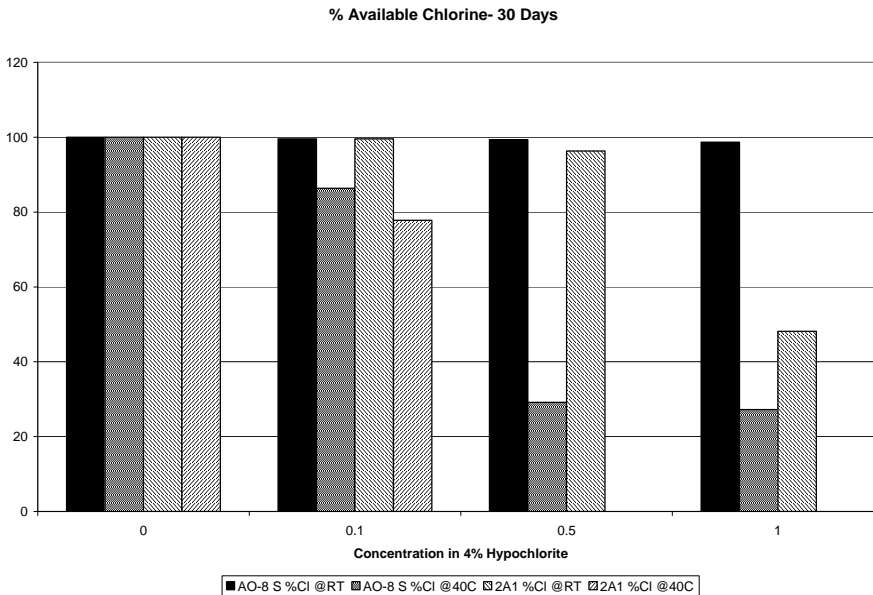
Refer to the Material Safety Data Sheet (MSDS) available from Mason Chemical Company for information on the safe use, handling and disposal of this product.

Macat is a trademark of Mason Chemical Company.

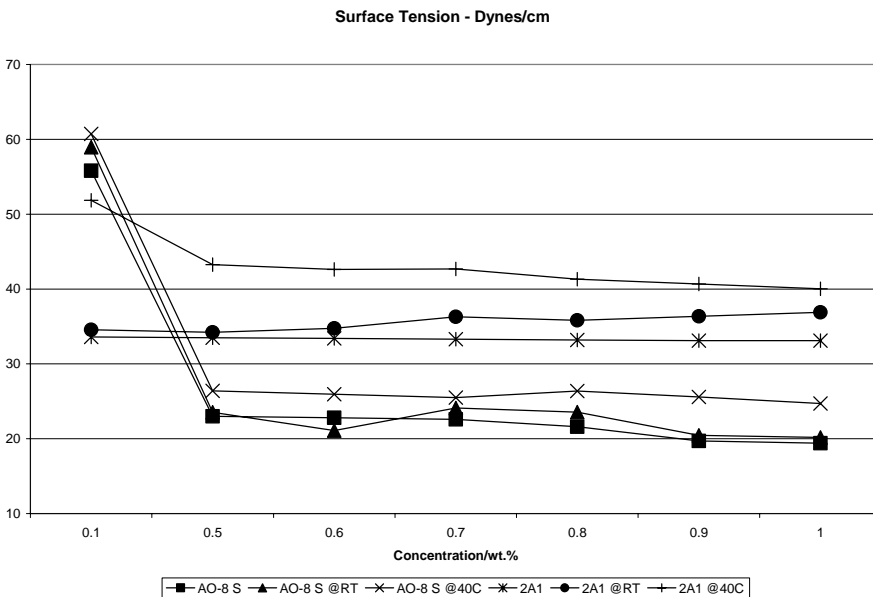
Macat[®] AO-8 Special



MACAT AO-8 Special is a modified 30% active octyl (C₈) dimethylamine oxide in water. AO-8 Special is an exceptional low foam wetting and coupling agent that is hypochlorite and alkali stable. The graph below illustrates the exceptional surface tension reduction performance of AO-8 Special in 4% NaOCl at a pH of 11.2



← This figure illustrates the hypochlorite stability of AO-8 Special versus a commonly used sodium dodecyl diphenyleneoxide disulfonate surfactant (2A1). AO-8 Special offers superior hypochlorite stability at both ambient temperature and 40°C after 30 days. Note that in the 2A1 system, all of the hypochlorite is consumed at 30 days at 40°C, and greater than half at ambient temperature.



← This figure illustrates the superior wetting performance of AO-8 Special versus 2A1 as a function of surface tension reduction. In addition to being low foam, AO-8 Special offers superior surface tension reduction at both ambient temperature and 40°C after 30 days for enhanced wetting, penetration and overall hypochlorite efficiency.

Formulation Guidelines-

Order of addition:

- Charge water to the vessel
- Add MACAT AO-8 SPECIAL and other surfactants/ingredients
- Add NaOH/KOH to desired pH
- Finally, add hypochlorite solution

Factors that influence hypochlorite stability are Concentration (the higher the initial concentration, the lower the stability), pH (stability increases with increasing pH: less reactive/improved stability), Temperature (elevated temperatures in manufacturing/storage decrease stability), Metals (metal contamination decreases stability), and Quality of hypochlorite solution.

The substances in Macat AO-8 Special are listed on the TSCA inventory, and are listed on the following Inventories: Canada (DSL, NDSL), Europe (EINECS), Philippines (PICCS), Australia (AICS), Korea (ECL).

See Material Safety Data Sheet for additional information.