



Formulating with NINOL® CAA

NINOL® CAA is a hydrophobic surfactant with limited solubility in water at room temperature (<0.1%). It is a *multifunctional* viscosity builder and foam stabilizer that also solubilizes a wide range of fragrances.

NINOL® CAA is compatible with most anionic surfactants, including alkyl sulfates (AS), alkyl ether sulfates (AES), methyl ester sulfonates (MES), alpha-olefin sulfonates (AOS), sulfosuccinates, sarcosinates, and glycinate.

General Guidelines

The recommended use level for NINOL® CAA is 1-3%. The 3% use level is recommended when solubilizing levels of fragrance above 1%.

NINOL® CAA can be added to a formula at the same time as primary and secondary surfactants. Since NINOL® CAA is a 100% active liquid, no heat is required during formulation.

NINOL® CAA may not be a drop-in amide replacement, especially in formulas with higher levels of betaine. Due to the superior viscosity building characteristics of NINOL® CAA, the amount of salt present in the formula needs to be taken into consideration when using NINOL® CAA as an amide replacement. For example, in a formula with the equivalent of 1.5% by weight of salt present, NINOL® CAA begins to build significant viscosity at a 1% use level, compared to the 2+% Cocamide MEA or Cocamide DEA required to build the same viscosity.

Recommended Procedure for Fragrance Solubilization

1. In a suitable vessel equipped with heating and agitation capabilities, charge water, primary and secondary surfactants, and water-soluble ingredients.
2. Mix until completely clear. (Heat may be required depending on ingredients added. If this is the case, 45-50°C is a recommended temperature.)
3. Adjust pH with citric acid to 5-6.
4. In a separate vessel, mix together NINOL® CAA and fragrance. For a 1% fragrance load, the typical amount of NINOL® CAA needed is 2-3%. Mix until completely clear.
5. Add this NINOL® CAA/fragrance mixture to the batch with agitation. Mix until completely clear.
6. Adjust pH to desired endpoint (4-6). Adjust viscosity with sodium chloride, if necessary.
7. Add preservatives and dyes with agitation.

NOTE: Fragrance compositions vary dramatically. Although NINOL® CAA solubilizes a wide range of fragrances, in some cases additional solubilizing agents (such as polysorbate 20, oleth-10, PEG-40 castor oil, etc) may be required to obtain a clear system. If these additional solubilizers are needed, they should be added to the NINOL® CAA and fragrance mixture in Step 4 above.