

# LOW FOAM AMINE OXIDES

## AO-405 and AO-455

U.S. Patent 5,972,875

Tomah has developed two new surfactants with exceptionally low foaming profiles which are also effective detergent molecules in a variety of applications.

Both molecules are alkoxyated ether amine oxides which have been prepared as 50% active materials in water. No flammable solvents are present in either product.

### Physical properties of AO-405 and AO-455:

Activity: 50% active.

Solvent: Water only. No flammable solvents present.

Color: Yellow to amber

Water Solubility: Infinite

Surface Tension at 0.1% actives (0.2% as-is) @22 degrees C:

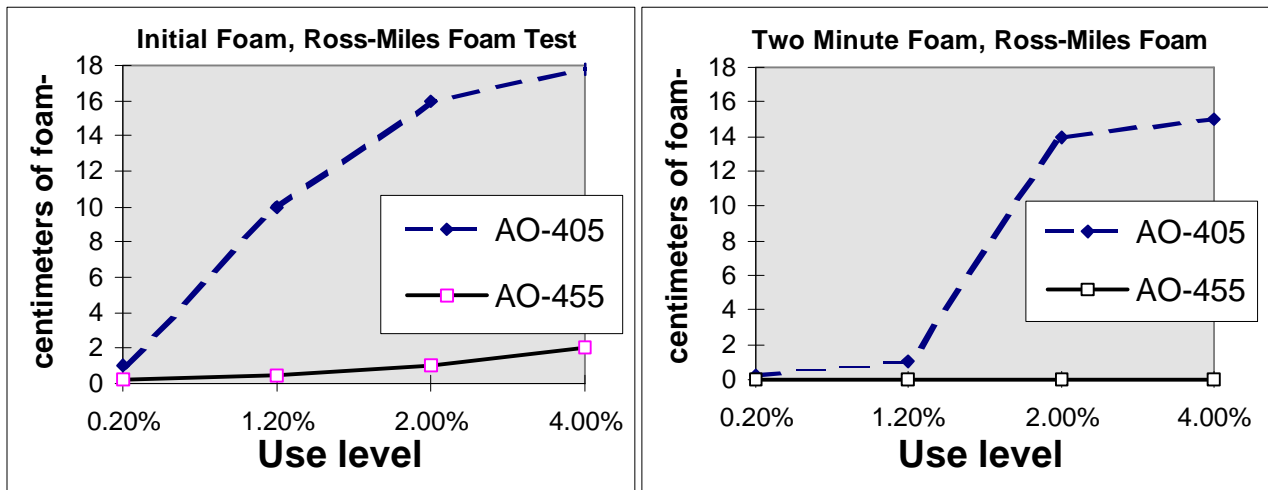
AO-405: 31 dynes

AO-455: 34 dynes

AO-405 has a low foaming profile at end use levels below 2%. The foam that does form is unstable and will break rapidly.

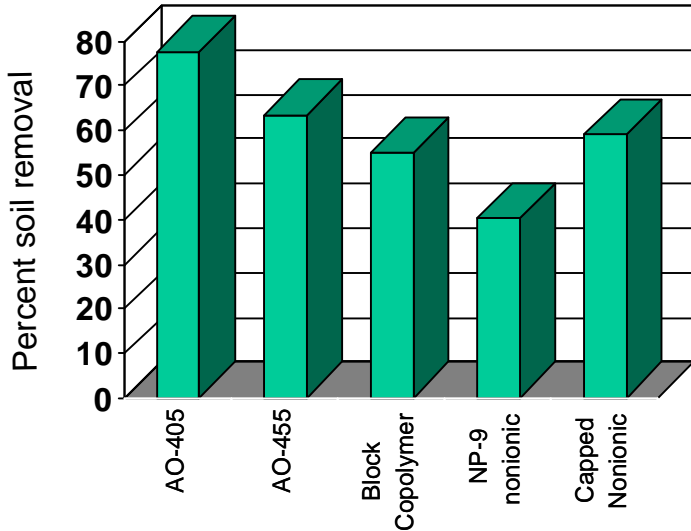
AO-455 is an ultra-low foaming molecule, having negligible foam generation at any use level. It is recommended for use in systems where extremely low foam is required.

### Foam Profiles of AO-405 and AO-455:



These two molecules also have demonstrated detergency, and are especially suited for hard surface applications where low or zero foam generation is required.

**Gardner Scrub in Simple Formulation**  
0.5% Surfactant, 1.0% NaOH, 3 minute soak, 10 strokes



**Note:** These materials are low foaming surfactants, but are not necessarily defoamers. If a formulation has a foaming agent present, the final formulation will most probably have high foaming characteristics, regardless of the presence or absence of these low foaming amine oxides.

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