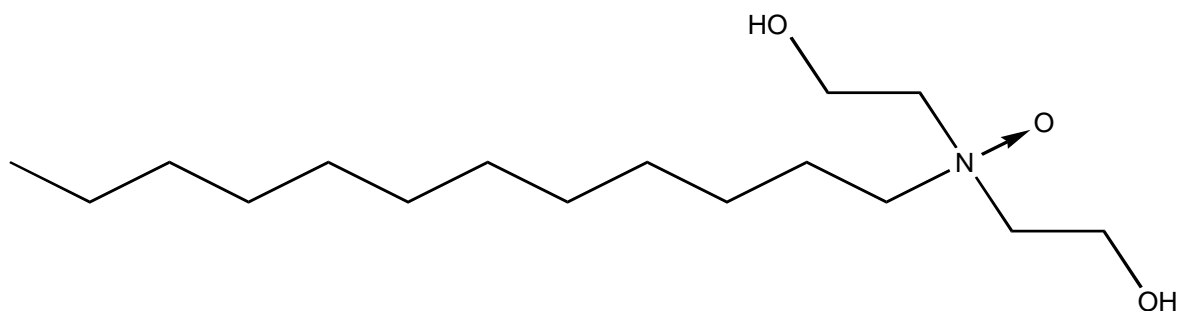


# Macat<sup>®</sup> AO-12-2



## Dihydroxyethyl Cocamine Oxide

### Overview

MACAT AO-12-2 is a 30% active dihydroxyethyl cocamine oxide in water. AO-12-2 provides viscosity control, and is an outstanding foam booster and foam stabilizer.

The exceptional quality of MACAT AO-12-2 allows for use in a wide range of markets and applications. In **Personal Care**, AO-12-2 is used as a conditioning ingredient in creams and conditioners, and as a foam booster in shampoos. Quality **Dishwash Detergents** utilize AO-12-2 for its stable foam and rinsing performance. **HI&I Cleaners** formulations commonly economically employ AO-12-2 for detergency, foam boosting and viscosity control.

MACAT AO-12-2 is biodegradable, and contains no solvents or VOCs.

**INCI Name: Dihydroxyethyl Cocamine Oxide**

**CAS#: 61791-47-7**

### Typical Properties

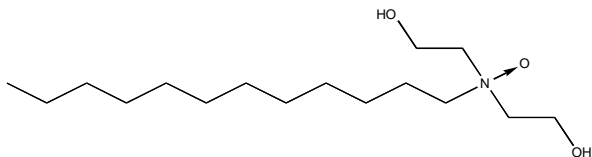
Water solubility .....	Complete
Physical form .....	Clear, pale yellow liquid
Viscosity @ 25°C .....	350 cps
Amine Oxide (m.w. 290).....	27-30%
Free Amine (m.w. 274).....	0.2% Maximum
Free Peroxide.....	0.2% Maximum
Specific gravity (25°C).....	0.98±0.04
pH (10% aq.) .....	7.0±1.5
Flash point.....	>200°F (PMCC)

### 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.

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# Macat® AO-12-2



MACAT AO-12-2 is a 30% active 30% active dihydroxyethyl cocamine oxide in water. AO-12-2 is an effective foam booster and conditioning agent. The formulations below illustrate this effect.

## Conditioning Shampoo

Ingredient	Wt%
Water.....	28.0
<b>Macat Ultra CDO</b> .....	35.0
<b>Macat AO-12-2</b> .....	35.0
<b>Maquat SL-5</b> .....	1.5
<b>Enhansys C-120</b> .....	0.5
Citric acid.....	q.s.
Ammonium Sulfate.....	0.5
Sodium Citrate.....	q.s.
Dye, Fragrance.....	q.s.

**Note**

Mix first 4 components, heat to 100-120°F. Adjust pH w/Citric acid to 6-7. Cool, adjust viscosity w/Ammonium sulfate, sodium citrate. Add remaining ingredients.

Enhansys C-120 deepens conditioning while fortifying the formulation to eliminate the need for preservatives.

Macat AO-12-2 contributes high lathering foam with conditioning properties.

## Premium Conditioner

Ingredient	Wt%
Water.....	q.s. to 100.0
<b>Macat AO-12-2</b> .....	20.0
<b>Maquat CETAC-30%</b> .....	10.0
<b>Maquat BPGTMC</b> .....	4.0
<b>Enhansys M-110</b> .....	0.5
Citric acid.....	q.s.
Dye, Fragrance.....	q.s.

**Note**

Pre-Mix first 3 components, heat to 100-120°F. Add Maquat BPGTMC. Mix until uniform. Cool, add Enhansys M-110, adjust pH w/Citric acid to 6-7. Add remaining ingredients.

Enhansys M-110 adds moisturization while fortifying the formulation to eliminate the need for preservatives.

Macat AO-12-2 contributes wetting and conditioning. Maquat BPGTMC significantly improves wet comb performance.

**INCI Names:** Macat Ultra CDO: Cocamidopropylamine Oxide, Macat AO-12-2: Dihydroxyethyl Cocamine Oxide, Maquat SL-5: Dihydroxypropyl PEG-5 Linoleammonium Chloride, Maquat CETAC-30%: Cetrimonium Chloride, Maquat BPGTMC: Behenoyl PG-Trimonium Chloride.

### US TSCA/International Inventory Status

Macat AO-12-2 complies with the requirements of the following chemical inventories: US (TSCA, FIFRA-EPA Pesticide Inert Ingredient), Canada (DSL), European Communities (EINECS), Australia (AICS), Korea (ECL), Philippines (PICCS), ASIA-PAC.

**Harmonized Tariff Schedule Code (United States 2005):** 3402.13.5000