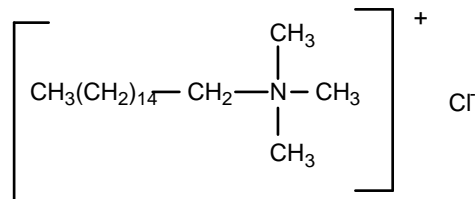


Product Bulletin

Product
Name

AMMONYX[®] CETAC-30

Chemical
Structure



Chemical
Description

AMMONYX CETAC-30 is an aqueous solution of cetyl trimethyl ammonium chloride.

CAS
Registry No.

112-02-7

INCI Name

Cetrimonium Chloride

Applications

Functional Properties

- Antistatic Agent
- Cleansing Agent
- Emulsifying Agent
- Suspending Agent
- Conditioning Agent
- Wetting Agent

End Product Uses

- Hair Conditioners
- Hair Styling Aids
- Creams and Lotions

Typical
Properties

Appearance at 25°C.....	Clear liquid
Amine HCl (MW 305) and Free Amine (MW 268.5), % combined	0.30
Actives, % (MW 319)	29.5
pH, 2% aqueous	7.0
Color, APHA.....	25.0
Cloud Point (as is), °C (°F).....	16 (61)
Pour Point, °C (°F)	4 (40)
Viscosity, cps at 25°C	6
Viscosity, cps at 60°C	14
Flash Point (PMCC), °C (°F)	>94 (>201)
Boiling Point, °C (°F)	100 (212)
Freeze Point, °C (°F).....	1 (34)
Density, g/ml (lbs/U.S. gal).....	0.965 (8.05)
RVOC, U.S. EPA, %	0
Preservative	Not required

Environmental Effects

Product is biodegradable. Additional information is available upon request.

Health Effects

At 5% active, AMMONYX CETAC-30 is practically non-toxic orally (LD₅₀ >5 g/kg) and causes severe skin and extreme eye irritation.

AMMONYX[®] is a registered trademark of the Stepan Company.



Storage & Handling

Normal safety precautions (i.e., gloves and safety goggles) should be employed when handling AMMONYX CETAC-30. Contact with the eyes and skin should be avoided. Wash thoroughly after handling material.

It is recommended that AMMONYX CETAC-30 be stored in sealed containers and kept in a cool, dry place at temperatures below 120°F (49°C). Avoid overheating or freezing.

Bulk Storage Information: AMMONYX quaternaries can be stored in vessels of 316 stainless steel or fiberglass with a corrosion liner. Contact between quaternaries and anionic materials, soap and sulfated oils must be avoided. AMMONYX quaternaries should be stored below 120°F (49°C). An internal hairpin coil of 316 stainless steel with low pressure steam (under 50 psig) should be used if heating is required. Pumps, pipes and transfer lines should be 316 stainless steel.

Standard Packaging: AMMONYX CETAC-30 is available in 55 gallon drums (net weight 425 lb/193 kg).

Storage & Handling

Occupational exposure can occur primarily through skin contact or via inhalation of vapors and mists. Engineering controls, personal protective equipment, and other workplace practices should be used to control these exposures.

Clearances

All components of AMMONYX CETAC-30 are listed in the following countries; the registration numbers for the active ingredients are included in parentheses: United States (TSCA 112-02-7), Australia (AICS 112-02-7), Canada (DSL 112-02-7), China (IECSC 112-02-7), Europe (EINECS 203-928-6), Japan (ENCS 2-184), Korea (ECL Serial No. KE-34535), New Zealand (NZIoC 112-02-7), and Philippines (PICCS 112-02-7).

It is the responsibility of the end user to review the chemical control regulations for each country.

AMMONYX CETAC-30 is available as Kosher Certified.

Formulations

THERMAL PROTECTION HAIR CONDITIONER

<u>Ingredients</u>	<u>% by Weight</u>
Phase 1. Deionized Water	q.s. to 100
Natrosol 250 HHRB (Hercules) Hydroxyethylcellulose	0.3
Phase 2. STEPANQUAT® ML	1.0
AMMONYX CETAC-30	3.3
Phase 3. CETYL ALCOHOL	1.5
STEARYL ALCOHOL	2.0
WECOBEE® S	0.2
STEPAN® PTC	2.5
Dow Corning 556 Cosmetic Grade Fluid (Dow Corning) Phenyl Trimethicone	0.5
Phase 4. Hydrotritium WAA (Croda) Wheat Amino Acids	1.0
Crodasone W (Croda) Hydrolyzed Wheat Protein PG-Propyl Silanetriol	1.0
Phase 5. Sodium Hydroxide	q.s.
Citric Acid	q.s.
Preservative, Dye, Fragrance	q.s.
Total	100.0

Mixing Procedure:

Prepare Phase 1 by dispersing Natrosol into solution. Add Sodium Hydroxide to raise pH to 7.0-8.0. When solution is clear, adjust pH with Citric Acid to a pH of 4.0-5.0. Add Phase 2. Mix well. Start heating to 168°F-170°F. Add Phase 3 at 170°F. Mix well for 20 minutes. Start cooling to Room Temperature. Add Phase 4 at 100°F. Mix well. Add Phase 5 if necessary, to adjust pH. Mix well.

Physical Properties:

Appearance at 25°C	Opaque
pH as is at 25°C	4.0-4.5
Viscosity at 25°C, cps	3000-4000

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