

## Key Performance Advantages

- Efficient primary amine neutralizing agent for acid functional raw materials
- Unmatched performance in hair spray, gel and mousses
- Milder alkalizing agent for semi-permanent and temporary hair dye



Personal Care

## AMP-ULTRA® PC

### Globally Compliant Neutralizer for Personal Care and Cosmetic Products

For pure and broadly compliant aminomethyl propanol (AMP®) in commercial quantities, you need AMP-ULTRA® PC neutralizing amine. With more than 30 years of experience in AMP development, has developed AMP-ULTRA PC to meet your global compliance needs.

AMP-ULTRA PC sets a quality benchmark as the preferred neutralizing agent, providing compliance as of May 2015 with European Union rulings on purity, secondary amine and nitrosamine content of raw materials used in the manufacture of cosmetics and personal care products.

- As of May 2015:
  - Compliant with EU Cosmetics Directive (EC) No. 1223/2009, the recast for the EU Cosmetics Directive 76/768/EEC and Amendments
  - CTFA, including listing in USA and Japan (aminomethyl propanol)
  - Mexico Prohibited and Restricted Substances in Perfumes and Cosmetics
  - Brazil ANVISA Mercosul Resolution on Cosmetics and Personal Care
  - ISO 9001: 2000 certified
- Three commercial grades to meet your processing needs: AMP-ULTRA PC 1000 (anhydrous)
  - AMP-ULTRA PC 1000 (anhydrous)
  - AMP-ULTRA PC 2000 (5% water)
  - AMP-ULTRA PC 3000 (11% water)
- Batch size up to 24 MT
- Standard packaging 195 kg drums; AMP-ULTRA PC 2000 and 3000 also available in 950kg IBCs (intermediate bulk containers)
- Global supply capability



## Typical Properties

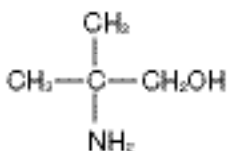
The following are typical physical/chemical properties of AMP-ULTRA PC. They are not to be considered product specifications.

Appearance (grade specific)	Colorless solid or liquid	Consistent and characteristic odor
Purity, anhydrous % weight (minimum)	99.0	
APHA color, 20 % aqueous solution (maximum)	20	
Secondary amines, anhydrous % weight	<0.5	
Nitrosamine content, ppb	<50	

## Application

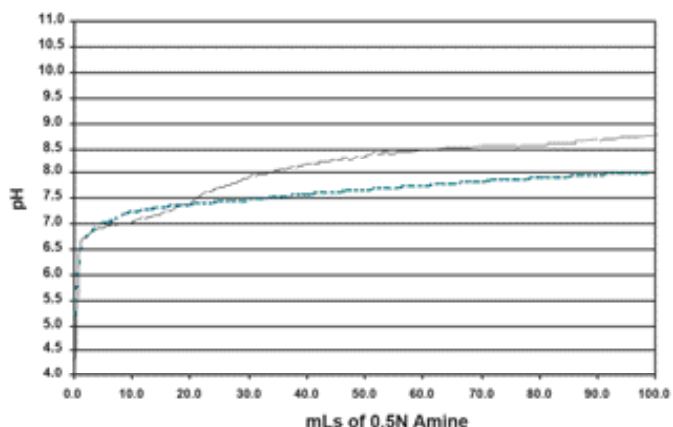
With its primary amine functionality, water- and alcohol-solubility and excellent toxicity profile, AMP-ULTRA PC is ideal for:

- Aerosol spray products
- Pump sprays
- Styling gels and mousses
- After-sun coolers
- Hand sanitizers
- Sunscreen lotions



The low molecular weight of AMP-ULTRA PC typically permits one-third less amine to be used for neutralization than is required for most other cosmetic grade amines. AMP-ULTRA PC provides superior color stability versus other amines and is compatible with virtually all fixative resins. AMP-ULTRA PC is available as an anhydrous solid (AMP-ULTRA PC 1000), a 95% concentration aqueous solution (AMP-ULTRA PC 2000), and as an 89% concentration aqueous solution (AMP-ULTRA PC 3000).

### Neutralization of 0.1N Stearic Acid with 0.5N AMP-ULTRA PC



## Suggested Sample Formulations

### Hairspray (low cost)

Ingredients	% by Weight	Supplier
Amphomer HC	2.25	National Starch
AMP-ULTRA PC	0.57	
Dimethicone copolyol	0.10	--
Alcohol	46.98	--
Perfume	0.10	--
Propane/Butane	50.00	--

### Natural Alcohol-Free Styling Gel

Ingredients	% by Weight	Supplier
A. Amaze	2.00	National Starch
AMP-ULTRA PC	0.30	--
Deionized water	71.50	--
Glycerine	1.00	--
B. Carbopol EDT 2020 (2% aqueous solution)	15.00	--
DOWICIL® 200 Preservative	0.20	--
Deionized Water	10.00	--

\*DOWICIL is a trademark of The Dow Chemical Company

### After-Sun Cooler

Ingredients	% by Weight	Supplier
A. Water, demineralized	82.35	--
B. Carbopol Ultrez	0.50	--
C. AMP-ULTRA PC	q.s.	
D. Propylene glycol	3.00	--
Glycerine	3.00	--
Betavera	10.00	--
Germaben II	1.00	--
FD&C Blue No. 1 (0.1% Solution)	q.s.	--
FD&C Yellow No. 5 (0.1% Solution)	q.s.	--
Fragrance	q.s.	--

## Health and Safety

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Typical of alkaline materials, undiluted aminomethyl propanol is severely irritating to the skin, eyes and mucous membranes of the gastrointestinal tract and respiratory tract and is not a dermal sensitizer. 2-amino-2-methyl-1-propanol is moderately toxic if swallowed, primarily due to the potential for burn damage to the mouth, throat and gastrointestinal tract. However, at the concentrations typically found in finished products (<2%), aminomethyl propanol has a low potential for toxicity. Please refer to the Safety Data Sheet for further information.

## Environmental and Disposal Considerations

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Biodegradation of aminomethyl propanol may occur slowly under both aerobic and anaerobic conditions, and is expected to occur in the soil environment. In the atmospheric environment, the material is estimated to have a tropospheric half-life of five hours and is, therefore, not likely to persist in the atmosphere. It is considered slightly toxic to aquatic organisms on an acute basis (LC50 or EC50 between 10 and 100 mg/L in the most sensitive species tested). Any disposal practice must be in compliance with all local and national laws and regulations. Please refer to the Safety Data Sheet for further information

## Product Stewardship

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Encourages its customers to review their applications of products from the standpoint of human health and environmental quality. To help ensure that products are not used in ways for which they are not intended, personnel will assist customers in dealing with environmental and product safety considerations. For assistance, product Safety Data Sheets, or other information, please contact your representative at the numbers provided in this document. When considering the use of any product in a particular application, review the latest Safety Data Sheet to ensure that the intended use is within the scope of approved uses and can be accomplished safely. Before handling any of the products, obtain available product safety information including the Safety Data Sheet(s) and take the necessary steps to ensure safety of use.