

# Merquat™ 550 Polymer

## INCI DESIGNATION:

Polyquaternium-7

## KEY FEATURES

Merquat™ 550 polymer is an aqueous copolymer developed for improved compatibility and clarity in anionic surfactant systems. This highly substantive copolymer is recommended to improve wet and dry properties of hair care products and to enhance feel in skin care products.

## PRODUCT DESCRIPTION

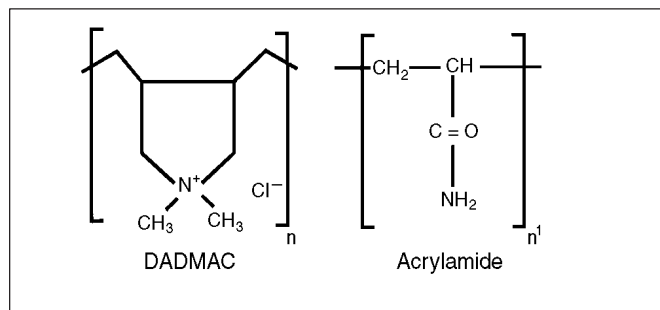
Merquat 550 polymer is an aqueous solution of the cationic copolymer of diallyl dimethyl ammonium chloride and acrylamide. Merquat 550 polymer contains methyl paraben and propyl paraben as preservatives.

## TYPICAL PROPERTIES AND CHARACTERISTICS

<b>Appearance:</b>	Clear, colorless viscous liquid
<b>Odor:</b>	Mild, aldehydic
<b>Color, APHA:</b>	15 max
<b>Total Solids, %:</b>	8.5 - 9.5
<b>pH:</b>	6.0 - 7.5
<b>pH Stability Range:</b>	3 - 12
<b>Brookfield Viscosity, mPa·s:</b> (RVF spindle #4 @ 10 rpm, 25°C)	7,500 - 15,000
<b>Molecular Weight (GPC, MALLS):</b>	$1.6 \times 10^6$
<b>Residual Acrylamide:</b>	≤10 ppm
<b>Recommended Starting Use Levels, % (as-supplied):</b>	1.0 - 4.0

**Toxicological Summary** – for a summary of toxicological information, please refer to the Merquat 550 polymer Material Safety Data Sheet.

## CHEMICAL STRUCTURE



Merquat™ 550 Polymer

## APPLICATIONS AND BENEFITS

### Hair Care Products

**Relaxers, Bleaches, Dyes, Shampoos, Conditioners, Styling Products and Permanent Waves:**

- Contributes luster and a soft, silky feel
- Provides rich, creamy foam to shampoos
- Provides excellent slip, lubricity and snag-free wet combability without excessive buildup
- Imparts excellent dry combability
- Panel studies document excellent hair softness and wet hair feel during washing, rinsing and after rinsing
- Suggested starting concentration: 1.0% as-supplied

Lubrizol Advanced Materials, Inc. / 9911 Brecksville Road, Cleveland, Ohio 44141-3247 / TEL: 800.379.5389 or 216.447.5000

The information contained herein is being furnished for informational purposes only, upon the express condition that the User makes its own assessment of the appropriate use of such information. While the information contained herein is believed to be reliable, no representations, guarantees or warranties of any kind are made as to its accuracy, suitability for a particular application or the results to be obtained herefrom. Lubrizol Advanced Materials, Inc. ("Lubrizol") cannot guarantee how any products associated with this information will perform in

combination with other substances or in the User's process. Due to variations in methods, conditions and equipment used commercially in processing these materials, no warranties or guarantees are made as to the suitability of the information or products for the applications disclosed. Lubrizol shall not be liable and the User assumes all risk and responsibility for any use or handling of any material beyond Lubrizol's direct control. LUBRIZOL MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO,

THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. It is the User's sole responsibility to determine if there are any issues relating to patent infringement of any component or combination of components relating to the supplied information. **Nothing contained herein is to be considered as permission, recommendation, nor as an inducement to practice any patented invention without permission of the patent owner.**

For further information, please visit: [www.lubrizol.com/personalcare](http://www.lubrizol.com/personalcare)

## Skin Care Products

***Moisturizing Creams, Lotions, Bath Gels, Liquid Soaps, Soap Bars, Shaving Products, Antiperspirants and Deodorants:***

- Imparts a smooth, velvety feel; reduces tightness after drying skin
- Provides excellent moisturization
- Contributes lubricity which can help make skin care products easier to apply
- Liquid cleansing products acquire richer, thicker foam with improved stability
- Suggested starting concentration: 1.0% as-supplied

*Suggested concentrations serve only as a starting point when formulating. Optimum performance will vary according to formulation type and desired result.*

## FORMULATION TIPS

- For best clarity when formulating liquid cleansing products, it is recommended to add Merquat 550 polymer in the beginning of the batch followed by a betaines or an amphoteric surfactant. Anionic surfactant or surfactant blends can be added later. Order of addition of formulation ingredients can be adjusted to help achieve clarity.
- In emulsion systems, Merquat 550 polymer can be added to the water phase or after emulsification. Avoid high mixing speeds.

## PACKAGING AND STORAGE

Merquat 550 polymer is available in the following packages:

- Polyethylene pails
- Polyethylene drums
- Totes
- Bulk

## ANIMAL TESTING

Merquat 550 polymer has not been tested on animals by Lubrizol Advanced Materials, Inc., or on behalf of Lubrizol Advanced Materials, Inc.

## REMARKS

If you need sample formulations, assistance or other information, please visit our website at [www.lubrizol.com/personalcare](http://www.lubrizol.com/personalcare).