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**noveon**  
The Specialty Chemicals Innovator™

Complete formulation procedures and supplier references are available on request. Please contact your Noveon representative or visit [www.personalcare.noveoninc.com](http://www.personalcare.noveoninc.com) for more information.

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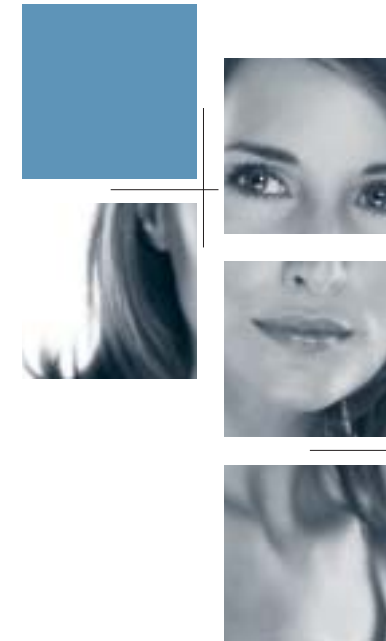
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**Carbopol®  
Ultrez 20 Polymer**

*The New Standard for High  
Performance Rheology Control*

**CARBOPOL®**  
*Ultrez*  
POLYMER



# Carbopol® Ultrez 20 Polymer — The New Standard for High Performance Rheology Control



## Introduction

Discover new possibilities in rheology control with Carbopol® Ultrez 20 polymer. Improve processing without sacrificing performance, and take your formulations to a higher level. For high clarity, low tack and smooth flow in gels, the choice is Carbopol® Ultrez 20 polymer. For efficient thickening in the presence of surfactants and electrolytes, the choice is Carbopol® Ultrez 20 polymer.

Carbopol® Ultrez 20 polymer is a patented, crosslinked acrylic acid copolymer with the following characteristics:

**INCI Name: Acrylates/C10-30 Alkyl Acrylate Crosspolymer**

Typical Properties	
Appearance	White powder
Salt Viscosity* (1% NaCl, mPa·s)	6,000
Mucilage Viscosity** (mPa·s)	54,000
Clarity** (% transmission)	>90
Wetting Time (3.0 wt.%)	5 - 6 minutes
Dispersion Viscosity*** (mPa·s)	>3,500

\*1% active polymer in water @ pH 7.3 - 7.8  
 \*\*1% active polymer in water @ pH 5.8 - 6.3  
 \*\*\*3% active polymer, after 3 hours

## Performance Without Compromises: Carbopol® Ultrez 20 Polymer

At Noveon, we're committed to continuous improvement and to the needs of the personal care formulator. Our product line features an array of polymers, each designed to create optimal performance across the spectrum of formulation needs and product requirements. The development of Carbopol® Ultrez 20 polymer represents a new standard for performance.

### Consider Carbopol® Ultrez 20 polymer...

#### For Processing Benefits

Carbopol® Ultrez 20 polymer features excellent ease of handling. It self-wets and disperses quickly and without agitation. It provides the user with consistent dispersion viscosity and efficient thickening ability. Carbopol® Ultrez 20 polymer has the high performance and reliability you expect from Noveon.

#### For Systems with 'Moderate' Levels of Surfactants

Carbopol® Ultrez 20 polymer demonstrates good stability with surfactant active levels of 10.0 - 12.0 wt.%.

#### For Superior Electrolyte Tolerance

Carbopol® Ultrez 20 polymer is designed to have higher electrolyte tolerance and handle a higher level of surfactant actives.

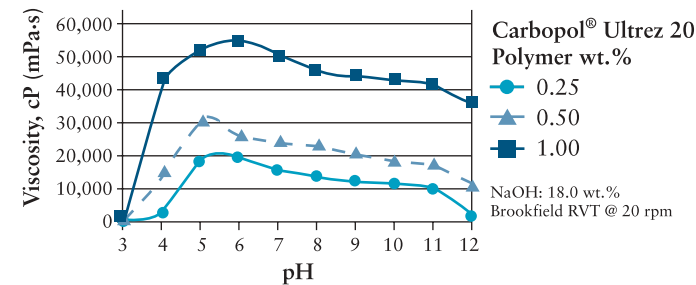
## Features and Benefits of Carbopol® Ultrez 20 Polymer

### Rapid Wetting

The unique structure of Carbopol® Ultrez 20 polymer allows for rapid wetting and improved swelling time without the need for agitation. This processing benefit is offered without compromising the performance that the personal care industry expects from the Carbopol® polymer product line.

### Efficient Thickening

Carbopol® Ultrez 20 polymer provides moderate-to-high viscosity with smooth flow properties. It's a versatile product that can be used when your formulations require viscosity and yield value or suspending properties. Carbopol® Ultrez 20 polymer performs effectively across a broad pH range, making it a versatile ingredient for many applications.



### Stability of Ingredients in Surfactant-Containing Formulations

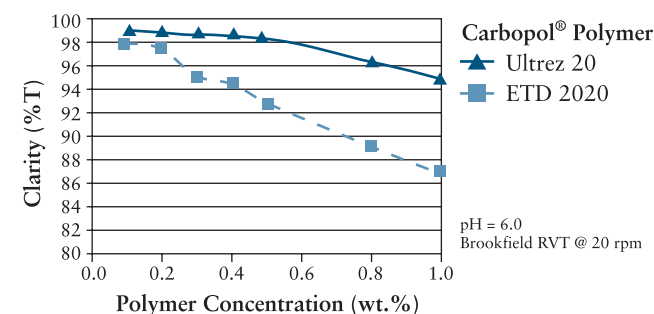
In shampoo and body wash formulations, Carbopol® Ultrez 20 polymer helps to suspend and stabilize beads, microcapsules and exfoliants for excellent product stability and visual appeal. In 2-in-1 formulations, Carbopol® Ultrez 20 polymer can stabilize silicone fluids and oils effectively.

### Enhanced Aesthetic Properties

Carbopol® Ultrez 20 polymer exhibits good clarity in gel formulations, along with providing a smooth, aesthetically pleasing gel quality. In creams and lotions, it helps to create emulsions with excellent skin feel.

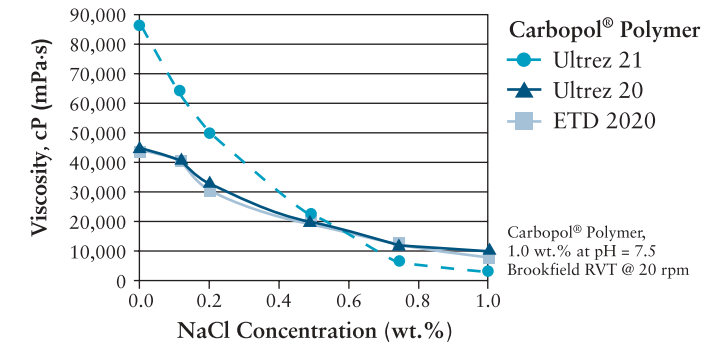
### Excellent Clarity

Even at high polymer concentration, Carbopol® Ultrez 20 polymer maintains superior clarity. It can be used with confidence in systems where sparkling clarity is required.



### Excellent Electrolyte Tolerance

Viscosity, clarity and stability are all maintained in the presence of electrolytes with Carbopol® Ultrez 20 polymer. It is ideally suited for use in formulations containing higher levels of oils, botanical ingredients, or actives like Sodium PCA.



## 'Formulator Friendly' Performance and Cost

Unlike traditional Carbopol® polymers, Carbopol® Ultrez 20 polymer can be dispersed at concentrations up to 6.0 wt.% and still remain pumpable. It self-wets rapidly to decrease processing time and its thickening efficiency will allow for use in a broad range of products, so performance will not have to be compromised to meet cost constraints.

## When to use Carbopol® Ultrez 20 Polymer

Carbopol® Ultrez 20 polymer is a new self-wetting rheology modifier that provides moderate-to-high viscosity with medium-long flow rheology. It is designed for use in:

- Shampoos
- Body washes
- Bath gels
- Lotions
- Hair and skin gels
- Creams

The newest development from the leaders in rheology control is Carbopol® Ultrez 20 polymer, a high-quality ingredient with a broad spectrum performance benefits. Experience the new standard for performance; with Carbopol® Ultrez 20 polymer, you won't need to compromise.

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