

# Carbopol® Polymers for Thickening, Suspending & Stabilizing

Carbopol® Ultrez 10 polymer is a universal polymer in the Carbopol polymer family. It is the easiest dispersing carbomer polymer available today for use in clear gels and emulsion systems, such as creams and lotions. Carbopol Ultrez 10 polymer provides highly efficient thickening and excellent clarity, suspending power and emulsion

stability with an elegant non-tacky feel. If you are considering Carbopol 934, 2984 or 5984 polymer for a cream or lotion; or Carbopol 940 or 980 polymer for a clear gel, try Carbopol Ultrez 10 instead. You will enjoy amazingly easy dispersing properties and all the performance properties you have come to expect from Carbopol polymers.

UNIVERSAL POLYMER	ULTREZ 10					
EASY-TO-DISPERSE POLYMERS				ETD 2001	ETD 2050	ETD 2020
TRADITIONAL POLYMERS		934		940	941	1342
COSOLVENT POLYMERS		2984	5984	980	981	1382
CTFA Designation	carbomer	carbomer	carbomer	carbomer	carbomer	acrylates/ C 10-30 alkyl acrylate crosspolymer
Flow Characteristics	short	short	short	very short	long	long
Relative Viscosity	high	high	high	very high	low	medium
Suspending Ability (yield value)	high	high	high	high	high	high
Mucilage Clarity	high	medium	medium	high	high	high
Relative Ion Tolerance	low	low	low	low	medium	high
Relative Shear Tolerance	medium	high	high	high	low	low
APPLICATIONS						
Clear Gels	•			•	•	•
Hydroalcoholic Gels	•			•	•	•
Lotions	•	•			•	
Creams	•		•	•		
Surfactant Systems (specialty shampoos, cleansing products)						•
High Electrolyte Systems (aloe gels, etc.)						•

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

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# Pemulen™ Polymeric Emulsifiers – Unique Universal Emulsifiers for O/W Formulations

PEMULEN™ POLYMERIC EMULSIFIER	TR-1	TR-2
CTFA Designation	acrylates / C 10-30 alkyl acrylate crosspolymer	acrylates / C 10-30 alkyl acrylate crosspolymer
Primary Emulsification	yes	yes
Oil Loading <sup>†</sup>	up to 30%	up to 70%
Relative Viscosity	high	low
Yield Value	high	high
Effective pH Range	4 - 9	4 - 9
Typical Use Concentration	0.2 - 0.4% <sup>‡</sup>	0.15 - 0.3% <sup>‡</sup>
<b>APPLICATIONS</b>		
Lotions (moderate oil loading)	•	•
Cream (moderate oil loading)	•	•
Milks, Sprayable Emulsions		•
Creams, Lotions (very high oil phase)		•

<sup>†</sup>with no secondary emulsifiers

<sup>‡</sup>higher levels may be needed in high electrolytes

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