

Carbomer 940

Technical Datasheet

1. Technical Datasheet

Property	Specification
Physical Properties	
Appearance	White, fluffy powder; fine granules; hygroscopic
Physical Form	Powder
Molecular Weight (g/mol)	3541
Density or Specific Gravity	1.54 g/mL at 25 °C/4 °C
Refractive Index	1.544 at 25 °C
pH (if aqueous solution)	3 (approximately)
Density	1.2 g/mL at 25 °C
Thermal Properties	
Melting Point	116°C
Boiling Point	141°C
Decomposition temperature	Decomposes above melting point (>116°C)
Thermal stability	Stable up to 75°C in use; decomposes at higher temperatures
Chemical Properties	
Incompatibilities	Sensitive to strong electrolytes/ions; avoid strong acids and bases

2. Processing Methods



Cosmetic cream

In cream production, sprinkle Carbomer into the aqueous phase with gentle stirring to avoid clumping, then allow full hydration. Use at 0.1-1%, depending on the desired consistency and feel. Neutralization should be done gradually to reach a pH of 5.5-7 for optimal viscosity

Key Ingredients	Indicative Dosage (% w/w)
Water (Purified)	66.75%
Propylene Glycol	3.71%
Isopropyl Palmitate	0.93%
White Oleic Acid	1.16%
Sorbitan Stearate	0.74%
Cetyl Alcohol	0.46%
Stearyl Alcohol	0.46%
Synthetic Beeswax	0.46%
Glyceryl Monostearate	1.16%
Stearic Acid	1.16%
Polysorbate 61 (Sorbitan Stearate)	1.16%
Myristyl Myristate	1.39%
Methylparaben	0.15%
Propylparaben	0.10%
Butylparaben	0.05%
Butylated HydroxyToluene	0.02%
Sodium Hydroxide	0.12%
Titanium Dioxide	0.20%
Benzyl Alcohol	0.28%
Fragrance	0.20%
Carbomer 941	0.28%



Hair shampoo

In hair shampoo production, disperse Carbomer slowly into the aqueous phase under continuous stirring to prevent clumping. Add surfactants after neutralization to avoid viscosity loss. Use at 0.1-1% for clear, stable, and smooth-flowing shampoos.

Key Ingredients	Indicative Dosage (% w/w)
Primary surfactants	8-12%
Secondary surfactants	2-5%
Butters	20-40%
Carbomer	0.1-1%
Water	40-50%

Sunscreen lotion

Disperse carbomer slowly into the water phase under vigorous stirring to prevent clumping, then neutralize with a suitable base to activate gelling. Maintain pH around 6-7 to preserve both Carbomer and UV filters. Use at 0.1-0.5%, and add after emulsification if fine viscosity adjustment is needed.

Key Ingredients	Indicative Dosage (% w/w)
Avobenzene	3%
Octocrylene	7%
C12-15 Alkyl Benzoate	5%
Glyceryl Stearate / PEG-100 Stearate	4.5%
Water	60-70%
Glycerine	4%
Carbomer	0.2%



Liquid Foundation

Disperse Carbomer slowly into the water phase with gentle stirring to avoid clumps. Neutralize it with a suitable base (like triethanolamine) after full hydration to achieve desired gel viscosity and smooth texture in the foundation.

Key Ingredients	Indicative Dosage (% w/w)
Dimethicone	10%
Glycerin	5%
Titanium Dioxide	3%
Phenoxyethanol	0.8%
Triethanolamine	0.3%
Carbomer	0.5%
Water	70-80%

3. Dosing by Application

Products	Authorized dosage %
Skin Creams, Gels	0.5-1%
Skin Lotions, Hydrating Lotions	0.2-0.75%
Skin Serums	>0.5%
Hair products	0.5-1%

4. Grade Comparison Summary

Parameter	Cosmetic Grade
Purity	≥ 98-99%
Residual Solvents	Low- residue
Appearance	White powder or granules
Regulatory Compliance	INCI, FDA (cosmetic OTC), REACH
Common Applications	Moisturizers, gels, styling products, sunscreens

The information and data contained herein are believed to be accurate but may not be all inclusive and should only be used as a guide. The information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the product for his particular use and on condition that they assume the risk of the use thereof.

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