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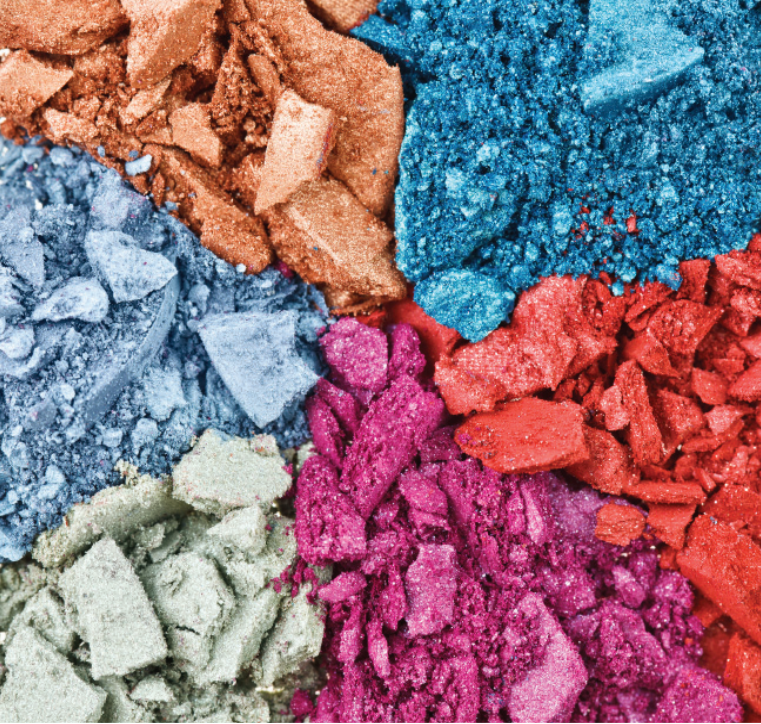
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# CMC

## Sodium Carboxymethylcellulose





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### SOURCE & PROCESSING

Sodium Carboxymethylcellulose (CMC), or 'Cellulose Gum', is a safe thickening agent. CMC, a water-soluble anionic polymer derived from cellulose, is comprised of the woody parts and cell walls of plants. It is cellulose ether produced by reacting alkali cellulose with sodium mono-chloracetate under controlled conditions.



### SOURCE

A water-soluble anionic polymer derived from cellulose.

### QUALITIES

- ~ Thickening Agent
- ~ Hydroscopic
- ~ Water-Soluble
- ~ Stabilizing
- ~ Emulsifying
- ~ Suspending Agent

### USES

- ~ Pharmaceutical
- ~ Cosmetic
- ~ Food
- ~ Industrial
- ~ Ceramics & Textiles

### USES

CMC is used for many different food, pharmaceutical and technical applications. These uses are based mainly on its reaction with water content in the finished product. It is used alone or in conjunction with other components in the system to create thickening, water-binding, suspension, stabilizing and emulsifying characteristics.



### PROPERTIES

#### Physical

It occurs as a white-to-cream colored powder, or granules. It is hygroscopic and insoluble in most solvents. The powder will be nearly odorless and transparent in solution.

#### Solubility

CMC is a water-soluble polymer soluble in either hot or cold water. It is insoluble in organic solvents but will dissolve in miscible solvents such as ethanol or acetone. CMC viscosity will not increase with temperature.

#### Degree of Substitutions

Typically the range of substitution is from .3 - 1.4. The sodium content will increase with the substitution range thus improving the compatibility with other soluble salts and non-solvents. Generally the compatibility will increase to ten times the substitution rate.

#### Viscosity

Viscosity ranges are from 50-8000 cps; with any desirable viscosity in between. Most concentrations are based on either a 1 or 2% solution and measured on a Brookfield LVT Viscometer. Point of complete hydration is achieved faster with finer mesh grades but care in dispersion is required. Thixotropic behavior is seen with medium and high grades of CMC (DS of 0.4-0.7) but grades with "smooth-flow" characteristics are commercially available.