

## Sodium Carboxymethyl Cellulose(CMC)

CAS: 9004-32-4

Sodium carboxymethyl cellulose, also known as carboxymethyl cellulose, CMC, is the most widely used and most used cellulose type in the world today. White fibrous or granular powder. It is a cellulose derivative with a glucose polymerization degree of 100 to 2000. It is odorless, tasteless, tasteless, hygroscopic, and insoluble in organic solvents.

Sodium carboxymethyl cellulose is compatible with strong acid solutions, soluble iron salts, and some other metals such as aluminum, mercury and zinc.Sodium carboxymethyl cellulose can form co-aggregates with gelatin and pectin, and can also form complexes with collagen, which can precipitate certain positively charged proteins.

### Quality Inspection

The main indicators to measure the quality of CMC are the degree of substitution (DS) and purity. Generally, the properties of CMC are different when the DS is different; the higher the degree of substitution, the stronger the solubility, and the better the transparency and stability of the solution. According to reports, when the degree of substitution of CMC is between 0.7 and 1.2, the transparency is better, and the viscosity of its aqueous solution is maximum when the pH is between 6 and 9. In order to ensure its quality, in addition to the choice of etherifying agent, some factors affecting the degree of substitution and purity must also be considered, such as the amount relationship between alkali and etherifying agent, etherification time, system water content, temperature, pH value, solution Concentration and salt, etc.

### Typical properties

Appearance	White to off-white powder
Particle size	95% pass 80 mesh
Degree of substitution	0.7-1.5
PH value	6.0~8.5
Purity (%)	92min, 97min, 99.5min

### Popular grades

Application	Typical grade	Viscosity (Brookfield, LV, 2%Soln)	Viscosity (Brookfield LV, mPa.s, 1%Soln)	Degree of Substitution	Purity
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For Paint	CMC FP5000		5000-6000	0.75-0.90	97%min
	CMC FP6000		6000-7000	0.75-0.90	97%min
	CMC FP7000		7000-7500	0.75-0.90	97%min
For food	CMC FM1000	500-1500		0.75-0.90	99.5%min
	CMC FM2000	1500-2500		0.75-0.90	99.5%min
	CMC FG3000		2500-5000	0.75-0.90	99.5%min
	CMC FG5000		5000-6000	0.75-0.90	99.5%min
	CMC FG6000		6000-7000	0.75-0.90	99.5%min
	CMC FG7000		7000-7500	0.75-0.90	99.5%min
For detergent	CMC FD7		6-50	0.45-0.55	55%min
For Toothpaste	CMC TP1000		1000-2000	0.95min	99.5%min
For Ceramic	CMC FC1200	1200-1300		0.8-1.0	92%min
For oil field	CMC LV		70max	0.9min	
	CMC HV		2000max	0.9min	

### 3.Application

Types of Uses	Specific Applications	Properties Utilized
Paint	latex paint	Thickening and Water-binding
Food	Ice cream Bakery products	Thickening and stabilizing stabilizing
Oil drilling	Drilling Fluids Completion Fluids	Thickening, water retention Thickening, water retention

It has the functions of adhesion, thickening, strengthening, emulsification, water retention and suspension.

1. CMC is used as a thickener in the food industry, has excellent freezing and melting stability, and can improve the flavor of the product and extend the storage time.
2. CMC can be used as an emulsion stabilizer for injections, a binder and film-forming agent for tablets in the pharmaceutical industry.
3. CMC in detergents, CMC can be used as an anti-soil redeposition agent, especially the anti-soil redeposition effect on hydrophobic synthetic fiber fabrics, which is significantly better than

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carboxymethyl fiber.

4. CMC can be used to protect oil wells as a mud stabilizer and water-retaining agent in oil drilling. The consumption of each oil well is 2.3t for shallow wells and 5.6t for deep wells.

5. CMC can be used as an anti-settling agent, emulsifier, dispersant, leveling agent, and adhesive for coatings. It can evenly distribute the solids of the coating in the solvent so that the coating will not delaminate for a long time. It is also widely used in the paint.



### **Packaging:**

CMC Product is packed in three layer paper bag with inner polyethylene bag reinforced , net weight is 25kg per bag.

12MT/20'FCL (with Pallet)

14MT/20'FCL (without Pallet)