

## Sodium Carboxymethyl Cellulose(CMC)

Sodium carboxymethyl cellulose(CMC), also known as: Sodium CMC, cellulose gum, CMC-Na, is cellulose ether derivatives, which is the most widely used and the largest amount in the world. It is a cellulose with a glucose polymerization degree of 100 to 2000 and a relative molecular mass of 242.16. White fibrous or granular powder. Odorless, tasteless, tasteless, hygroscopic, insoluble in organic solvents.

CMC is an anionic cellulose ether, white or milky white fibrous powder or granule, density 0.5-0.7 g/cm<sup>3</sup>, almost odorless, tasteless, and hygroscopic. Easily disperse in water into a transparent gel solution, insoluble in organic solvents such as ethanol. The pH of 1% aqueous solution is 6.5~8.5. When pH>10 or <5, the viscosity of the glue will decrease significantly, and the performance is best when pH=7. Stable to heat, the viscosity rises rapidly below 20°C, and changes slowly at 45°C. Long-term heating above 80°C can denature the colloid and significantly decrease its viscosity and performance. It is easily soluble in water and the solution is transparent; it is very stable in alkaline solution, and it is easily hydrolyzed when it meets acid. It will precipitate when the pH is 2-3, and it will also react with polyvalent metal salt to precipitate.

### 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% Solu)	Viscosity (Brookfield LV, mPa.s, 1% Solu)	Degree of Substitution	Purity
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	

## Application

### 1. Food grade CMC

Sodium carboxymethyl cellulose CMC is not only a good emulsion stabilizer and thickener in food applications, but also has excellent freezing and melting stability, and can improve the flavor of the product and extend the storage time. The amount used in soy milk, ice cream, ice cream, jelly, beverages, and cans is about 1% to 1.5%. CMC can also be combined with vinegar, soy sauce, vegetable oil, fruit juice, gravy, vegetable juice, etc. to form a stable emulsified dispersion, and its dosage is 0.2% to 0.5%. Especially for animal and vegetable oils, proteins and aqueous solutions, it has excellent emulsification performance.

### 2. Detergent grade CMC

Sodium carboxymethyl cellulose 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 carboxymethyl fiber.

### 3. Oil drilling grade CMC

Sodium carboxymethyl cellulose 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;

### 4. Textile grade CMC

CMC used in textile industry as sizing agent, thickener for printing and dyeing paste, textile printing and stiffening finishing. Used as a sizing agent, it can improve the solubility and viscosity change, and is easy to desizing; as a stiffening finishing agent, its dosage is more than 95%; used as a sizing agent, the strength and flexibility of the serosal film are significantly improved; CMC has adhesion to most fibers, can improve the bonding between fibers, and its viscosity stability

**KIMA CHEMICAL CO.LTD**  
Add:Zhangdian,Zibo, Shandong, P.R.China  
Tel: +86-533-6281218  
Email:sales@kimachemical.com  
[www.kimachemical.com](http://www.kimachemical.com)



can ensure the uniformity of sizing, thereby improving the efficiency of weaving. It can also be used as a finishing agent for textiles, especially for permanent anti-wrinkle finishing, which can change the durability of the fabric.

#### **5. Paint grade CMC**

CMC used in paint ,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 paint and coating will not delaminate for a long time.

#### **6. Paper-making grade CMC**

CMC is used as a paper sizing agent in the paper industry, which can significantly improve the dry and wet strength, oil resistance, ink absorption and water resistance of paper.

#### **7. Toothpaste grade CMC**

CMC is used as a hydrosol in cosmetics and as a thickener in toothpaste, and its dosage is about 5%.

#### **8. Ceramic grade CMC**

CMC can be used as flocculant, chelating agent, emulsifier, thickener, water-retaining agent, sizing agent, film-forming material, etc in ceramic , And because of its excellent performance and wide range of uses, it is still constantly exploring new application areas, and the market prospect is extremely broad.



#### **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)