Add:Zhangdian,Zibo, Shandong, P.R.China Tel: +86-533-6281218 Email:sales@kimachemical.com



#### **Pharmaceutical grade HPMC**

CAS NO.:9004-65-3

www.kimachemical.com

#### **Molecular Formula**

Hypromellose (Hydroxypropylmethylcellulose: HPMC) substitution type 2910, 2906, 2208 (USP)

### **Physical Properties**

- White or yellowish white powder
- Soluble in mixed organic or aqueous solvent
- Making up transparent film when solvent remove
- No chemical reaction with drug due to its non-ionic property
- Molecular Weight: 10,000 ~ 1,000,000
- Gel point : 40 ~ 90 °C
- Auto-ignition Point : 360°C

Hydroxypropyl Methylcellulose (HPMC) Pharmaceutical Grade is Hypromellose pharmaceutical excipient and supplement, which can be used as thickener, dispersant, emulsifier and film-forming agent.

KimaCell Cellulose ether consists of methyl cellulose (USP, EP,BP,CP) and three substitution types of hydroxypropyl methyl cellulose (hypromellose USP, EP,BP,CP) each available in several grades differing in viscosity.HPMC products are derived from natural refined cotton linter and wood pulp, meeting all the requirements of the USP, EP, BP, along with Kosher and Halal Certifications.

In the manufacturing process, highly purified natural cotton is etherified with methyl chloride or with the combination of methyl chloride and propylene oxide to form a water-soluble, non-ionic cellulose ether. No animal resources are used in the production of HPMC.HPMC can be used as a binder for solid dosage forms such as tablets and granules. It also serves a variety of functions, for examples, in enhancing water retention, thickening, acting as a protective colloid due to its surface activity, sustaining release, and film formation.

KimaCell HPMC provides a variety of functions such as water retention, protective colloid, surface activity, sustained release. It is a non-ionic compound resistant to salting out and stable over a wide pH-range. Typical applications of HPMC are binder for solid dosage forms such as tablets and granules or thickener for liquid applications.

Pharma HPMC comes in diverse viscosity ranges from 3 to 200,000 cps, and it can be widely used for tablet coating, granulation, binder, thickener, stabilizer and making vegetable HPMC capsule.

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# 1.Chemical Specification



Hypromellose Specification	E ( <b>2910</b> )	F ( <b>2906</b> )	K ( <b>2208</b> )
Gel temperature $(^{\circ}\mathbb{C})$	58-64	62-68	70-90
Methoxy (WT%)	28.0-30.0	27.0-30.0	19.0-24.0
Hydroxypropoxy (WT%)	7.0-12.0	4.0-7.5	4.0-12.0
Viscosity(cps, 2% Solution)	3, 5, 6, 15, 50, 100, 400,4000, 10000, 40000, 60000,100000,150000,200000		

### **Product Grade:**

Hypromellose Specification	60E ( <b>2910</b> )	65F ( <b>2906</b> )	75K ( <b>2208</b> )
Gel temperature $(^{\circ}\mathbb{C})$	58-64	62-68	70-90
Methoxy (WT%)	28.0-30.0	27.0-30.0	19.0-24.0

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Hydroxypropoxy (WT%)	7.0-12.0	4.0-7.5	4.0-12.0
Viscosity(cps, 2%	3, 5, 6, 15, 50, 100, 400,4000, 10000, 40000,		
Solution)	60000,100000,150000,200000		

# 3.Application

Pharma Grade HPMC enable the production of controlled-release formulations with the convenience of the most widely used tablet-binding mechanism. Pharma Grade offer good powder flow, content uniformity, and compressibility, making them well suited for direct compression.

Pharma Excipients Application	Pharma Grade HPMC	Dosage
Bulk Laxative	K4M,K100M	3-30%
Creams, Gels	E4M,K4M	1-5%
Ophthalmic Preparation	E4M	010.5%
Eye Drops Preparations	E4M	0.1-0.5%
Suspending Agent	E4M,K4M	1-2%
Antacids	E4M,K4M	1-2%
Tablets Binder	E5, E15	0.5-5%
Convention Wet Granulation	E5, E15	2-6%
Tablet Coatings	E5, E15	0.5-5%
Controlled Release Matrix	K100M,K15M	20-55%





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### 4. Features and Benefits:

- Improves product flow characteristics
- Reduces processing times
- Identical, stable dissolution profiles
- Improves content uniformity
- Reduces production costs
- Retains tensile strength after double compaction (roller compaction) process

# 5.Packaging

The standard packing is 25kg/drum

20'FCL: 9 ton with palletized; 10 ton unpalletized. 40'FCL: 18 ton with palletized; 20 ton unpalletized.