

TECHNICAL DATA SHEET

HPMC – E5

PRODUCT DESCRIPTION:

HPMC E5 is a low-viscosity, water-soluble, non-ionic cellulose ether derived from natural cellulose. White in color, free flowing powder and soluble in cold water or mixed solvents. It is widely used in the pharmaceutical industry as a film-former, binder, suspending agent, and in various oral and topical formulations. HPMC E5 is known for its excellent film-forming capability, fast dissolution, and inertness, making it suitable for applications requiring rapid film coating and fast drug release.

PROPERTIES:

Free flowing powder

Supports aqueous and solvent-based formulations.

Excellent film forming ability - forms smooth, thin, uniform, films on tablets or granules.

Supports with a wide range of products.

Helps maintain uniform dispersion in liquid oral formulations.

Emulsion stabilizer – prevents separation in creams and lotion.

APPLICATION:

Helps maintain uniform dispersion in liquid oral formulations.

Film Coating Agent – form a smooth, uniform film on tablets or granules.

Ophthalmic use -for eye drops with low thickness.

Use as a binder in tablet formulation.

TECHNICAL SPECIFICATION

TEST	RESULT
Appearance	White Powder
Viscosity m.Pa.s	5.6
pH Value	5-8
Water insoluble matter %	0.3
Loss on drying (LOD) %	2.4
Residue on ignition (ROI) %	0.7
Heavy metal, PPM	≤ 10
Arsenic %	≤ 0.0002
Aerobe, cfu	1000
Molds and test, cfu	100
Escherichia coli (E. coli)	None
Methoxy %	28.2
Hydropropoxy %	7.3
Gelatin Temp ($^{\circ}\text{C}$)	$\geq 50^{\circ}\text{C}$

ADVANTAGES

Low viscosity - easy to handle in solution preparation.

Stable in various pH ranges.

Rapid dissolution - suitable for immediate release tablets.

Glossy, protective, non-tacky coatings on tablets.

Inert nature low interaction risk with active ingredients.

DOSAGES

Recommended dosages of E5 used in film coating, solid dispersant, plant capsules, film forming agent gel, ointment emulsifier, suspending agent, stabilizer for film coating use in amount of 2% -10%

The dosages of tablet adhesive are 1% - 5%

STORAGE

It should be stored in a dry and cool place in its original packing.

To avoid directly contact with sunlight, high temperature and humidity storage may reduce this period.

SHELF LIFE:

Storage time should not exceed 12 months from receipt of delivery.

PACKING

HPMC – E5 is packed in paper plastic barrel with a net weight of 25 kg per barrel.

