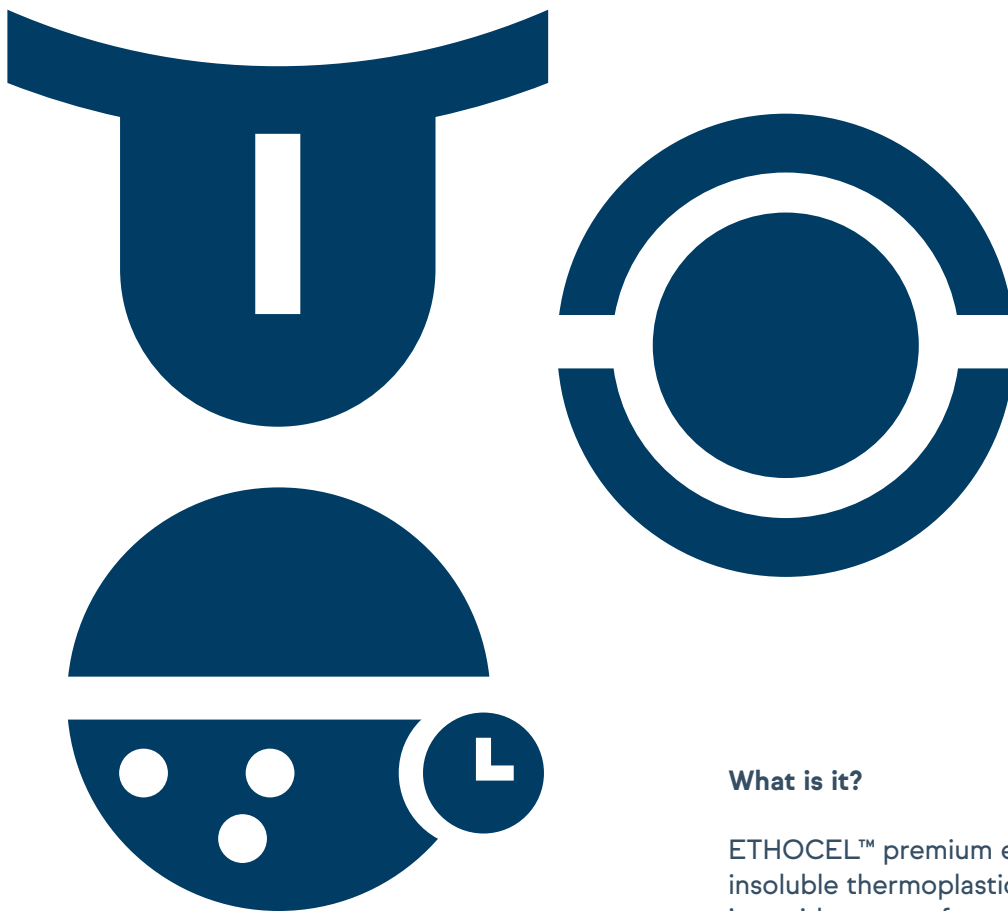


ETHOCEL™

Ethylcellulose polymers – An excellent choice for a variety of formulation needs



What is it?

ETHOCEL™ premium ethylcellulose resins are water-insoluble thermoplastic polymers. They are soluble in a wide range of organic solvents, beginning with aliphatic alcohols such as ethanol and isopropanol, and are compatible with most other familiar organic solvent chemistries, including ether alcohols, ketones, aromatic hydrocarbons and many more.

Their excellent compatibility allows use of ETHOCEL™ polymers with many basic ingredients across a broad array of pharmaceutical applications such as controlled-release matrix systems, multi-particulate coatings, and microencapsulation. They are also useful as non-aqueous granulation binders, as film-formers to control drug release rate and in taste-masking of actives.

Product Recommendations*

Application	Recommended ETHOCEL™ Grades	Benefits
Controlled-Release Coatings	Standard 7, 10 or 20 Premium	Strong films with good adhesion, providing a versatile diffusion barrier
Dry Powder Layering	High Productivity	Improved efficiency and shorter coating times, while completely eliminating the need for environmentally harmful solvents
Micro-Encapsulation	Standard 45 or 100 Premium	Durable rate-modifying barriers that can be compressed without fracturing
Controlled-Release Hydrophobic Matrices	Standard 7 FP, 10 FP or 100 FP Premium	Release profile modification of an inert matrix without swelling or dissolving
Solvent and Extrusion Granulation	Standard 10, 20 or 45 Premium	Enables production of strong, low-friability tablets
Tablet-Binding	Standard 7 FP Premium, 10 FP Premium or 100 FP Premium	Versatility in drug release rates as well as improvements in processing conditions
Taste-Masking	Standard 4, 7, 10 or 20 Premium	Prevents immediate dissolution upon ingestion
Moisture Barrier	Standard 7, 10 or 20 Premium	Protection for water-sensitive APIs and improved formulation
Hot-Melt Extrusion	Standard 10 Premium	Excellent thermoplasticity; softens between 135°C to 160°C

* Examples only and not representative of a complete list of recommended products or benefits

Key Benefits

- Essentially colorless, odorless, non-caloric, inert physiologically
- Organo-soluble in a wide variety of solvents
- Capable of managing water-sensitive ingredients or those requiring greater taste-masking
- Allows for reduced processing time and cost, better content uniformity and improved bioavailability of poorly soluble drugs
- Excellent compatibility in a wide variety of pharmaceutical systems and with both acidic and alkaline ingredients
- Thermoplastic properties

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