



**METHOCEL**<sup>TM</sup>  
PREMIUM CELLULOSE ETHERS

Designing Nutritional and Dietary  
Supplements for Extended Release



### Drive Consumer Preference

- Differentiate your product with consumer appeal
- Provide convenient one-a-day tablets
- Improve delivery of active ingredients

From Core to Coating, *Naturally* Your Supplier of Choice®



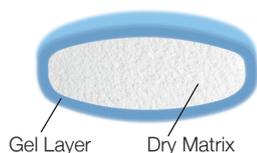


## Consumer Friendly Tablets

Extended release tablets are formulated to make the active ingredient available to the body over a longer time period following ingestion. This typically enables a once-a-day routine which reduces the number of tablets consumers need to take.

## Matrix Tablets for Extended Release

The main component used in extended or time-release tablets is METHOCEL™ (hypromellose) which is derived from cellulose, one of nature's most abundant natural polymers. Using matrix technology, the tablet containing active ingredient and METHOCEL™ gently forms a gel layer (following ingestion) which naturally extends release of the active ingredient(s) over several hours.



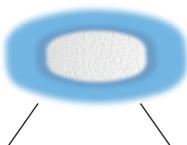
### Initial Wetting

Polymer at surface hydrates to form protective gel layer.



### Gel layer expands

Water permeates into the tablet, increasing the thickness of the gel layer; soluble ingredients diffuse out.



### Tablet Erosion

Outer polymer layer becomes fully hydrated, eventually dissolving into the gastric fluids. Water continues to permeate toward the tablet core.

#### Soluble active ingredients

Are released primarily by diffusion through the gel layer.

#### Insoluble active ingredients

Are released primarily through tablet erosion.

## Controlled Release Alliance

Together, IFF and Colorcon service the distinct needs of nutritional supplement manufacturers.

This alliance brings together the manufacturing excellence and polymer expertise of IFF with the global reach and technical applications knowledge of Colorcon.

From formulation and tablet design through product differentiation and branding, Colorcon gives you everything you need to deliver high-performance, consumer focused healthcare products.



- Simple and efficient to manufacture
- Consumer friendly coating can be added
- Extending release prolongs action of the active ingredients
- Value-add through product differentiation

## Naturally Derived Materials

Label friendly and GMO-free, METHOCEL™ Premium Cellulose Ethers provide a range of naturally derived extended release tablet ingredients to extend and improve the delivery of nutritional and dietary supplements.

### Contact your Colorcon representative or call:

#### North America

+1-215-699-7733

#### Europe/Middle East/Africa

+44-(0)-1322-293000

#### Latin America

+54-11-5556-7700

#### India

+91-832-6727373

#### China

+86-21-61982300



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