

# Eastman pharmaceutical excipients

## Cellulose esters for sustained release

CA-398-10 NF/EP

CA-320S NF/EP

CAB-171-15 NF

### Key attributes

- For use in coatings: semipermeable, excellent film former, strong, flexible
- Characteristics of coating can be modified (permeability, mechanical strength, flexibility) through blending two CAs or CA with CAB.
- For use in tableting: directly compressible, matrix for sustained release
- CAB is more hydrophobic than CA.

### Examples of typical applications

- Semipermeable membrane for osmotic drug delivery systems
- Coating for extended-release tablets
- Coating for taste masking
- Binder to make tablets for sustained release via direct compression

### Formulation tips

- Requires a solvent for coatings formulations
- Modify a wide range of film properties through additives
- Adjust sustained release by blending CA with CAB

## Enteric coating polymer

C-A-P NF

### Key attributes

- pH-sensitive as it hydrolyzes at pH 6 or higher
- Solvent based
- Stable if stored in a sealed container in a cool, dry place
- Two physical forms: powder and pellet
- Compressible
- Multiple plasticizers are appropriate for use with C-A-P.
- Advantage over water-based coatings materials: coats very small tablets or water-sensitive actives

### Examples of typical applications

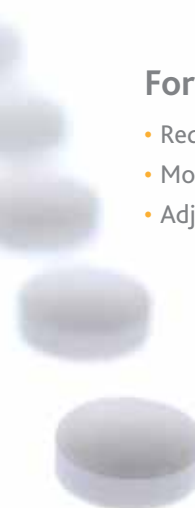
- Enteric coating for tablets, softgels, and granules
- Binder to make tablets for delayed release via direct compression

### Formulation tips

- Best if used in solvent systems
- Adding a plasticizer increases film flexibility.
- Can be used in aqueous systems through ammonia neutralization
- Can be used at levels as low as 0.5%

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For more information, visit [www.eastman.com/pharma](http://www.eastman.com/pharma).



**EASTMAN**

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