

EASTMAN™ CAB

Cellulose Acetate Butyrate, Sustained-Release



When cellulose is esterified with both acetyl and butyryl radicals to form the mixed ester, cellulose acetate butyrate, many of the desirable properties of both esters are obtained. **Eastman™ CAB 171-15 NF** cellaburate, can be used as coating material as the semi-permeable membrane for osmotic drug delivery. It is also used for taste-masking and sustained release tableting. **Eastman™ CAB 171-15 NF** is made under cGMP and meets the requirements of the National Formulary (NF) and is the subject of U.S. Drug Master File 15490. It is available in powder form.

Sustained Release Through Permeable Membranes

The osmotic pump drug delivery technology typifies sustained release that capitalizes on the nature of **CAB** films - insoluble yet semipermeable - to allow water to pass through a tablet coating. An osmotic agent that swells absorbs the water, forcing the active out through a hole drilled in the film. The same effect can also be achieved by employing water-soluble materials, e.g. hydrophilic plasticizers like PEG 400 or TEC, in the film to increase the drug's ability to diffuse through it. **CAB 171-15 NF** is less hydrophilic and has a higher viscosity compared to the two pharmaceutical grades of **CA**. At the same time **CAB 171-15 NF** films are slightly more flexible. One can tailor the permeability of a coating film between **CA** and **CAB** by adjusting the ratio of **CA** to **CAB** in the coating formulation.

Sustained Release by Direct Compression

CAB 171-15 NF can be used as matrix for sustained release formulations from direct-compression. The methodology employed consisted of mixing plasticizer, if any, with **CAB 171-15 NF** followed by incorporation of the active with additional mixing. On one hand, the release rate can be adjusted by the ratio of active to polymer, on the other hand by the addition of plasticizers. Interestingly, **CAB** shows, unlike **CA**, a release profile that is dependent on the compression force. Higher compression force leads to slower release rate.

Solid Dispersions

Another application for **Eastman™ CAB** is the use in solid dispersions to obtain a sustained release profile for poorly soluble drugs. Because of its hydrophobicity **Eastman™ CAB** has good solubilising properties, but swells only slightly in water. It should only be used in combination with other polymers or a sufficient amount of plasticizers in solid dispersions.

CAS-No.:	9004-36-8
Packing:	50 kg fiber drum with inner PE-lining
Shelf life:	5 years
Storage:	At ambient temperature, protected from moisture.



GUSTAV PARMENTIER GmbH

Eichendorffstr. 37
60320 Frankfurt am Main
Germany

Phone: +49 (69) 561034
Fax: +49 (69) 568518
www.parmentier.de
info@parmentier.de