

# Welcome to a new era! MEGGLE's first lactose-free co-processed excipient: Reta M<sup>®</sup>



MEGGLE has been known as one of the key lactose excipient manufacturers and pioneer of co-processed excipients for decades. In 2009 MEGGLE introduced RetaLac<sup>®</sup> a combination of lactose monohydrate and hypromellose, tailored specifically to sustained drug release formulation, which can be easily produced by direct compression.

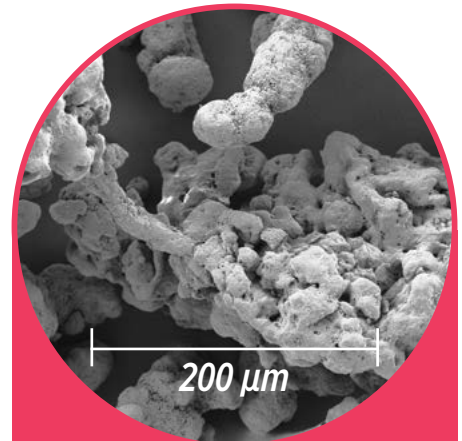
Now MEGGLE is proud to introduce its first lactose-free excipient: **Reta M<sup>®</sup>**. It's comprising 50% Mannitol and 50% hypromellose (K4M) and easily enables sustained drug formulation through direct compression.

## Product description

**Reta M<sup>®</sup>** is the first hypromellose/mannitol-based, co-processed excipient specifically designed for DC and dry granulation of modified release formulations. To minimize development time, API dissolution prediction as a function of tablet geometry is possible. This is aided by **Reta M<sup>®</sup>**'s dramatic improvement in wettability compared to HPMC alone or in traditional wet granulations and simple admixtures.

## Application

- Tableting - Direct Compression, also for multi unit and mini tablets
- Tableting - Roller Compaction
- Preparation of aqueous HPMC-formulations (thickener)
- Spheronization, Extrusion



**Reta M<sup>®</sup>**

**lactose-free**

## Benefits

- All-in-one excipient which enables manufacture of sustained drug release (time release) tablets by direct compression
- Prolonged drug release up to 13 hours
- High loading capability up to 50% drug load
- Pharmacopoeial quality
- Lactose-free

# Reta M<sup>®</sup>

## Impressing functional performance. Outstanding compactibility. Well-founded expertise.



### Powder characterization

Reta M<sup>®</sup>'s PSD and bulk density (400 g/l) are right in the range of providing free flow, good blending capabilities and compaction behavior. Its powder flow ranks as "Fair-aid not needed".

Co-processing two or more excipients generally improves the resulting excipient's **compactibility** over its physical ad-mixture. This effect can also be seen for Reta M<sup>®</sup>. It shows a quite linear increase of tablet hardness as function of employed compaction pressure, which allows for reliable and better-to-predict product performance.

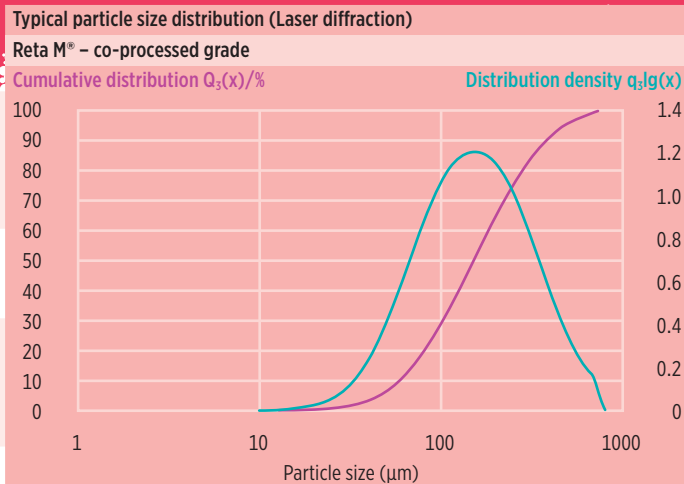
### Sustained release

Reta M<sup>®</sup> works with a variety of APIs and food supplements. To demonstrate Reta M<sup>®</sup> performance, vitamine C has been chosen as active molecule, whose sustained release has been widely accepted to be beneficial to its subsequent user. Employing Reta M<sup>®</sup> as excipient in order to manufacture tablets via direct compression has led to prolonged release of vitamine C over the course of 13 hours.

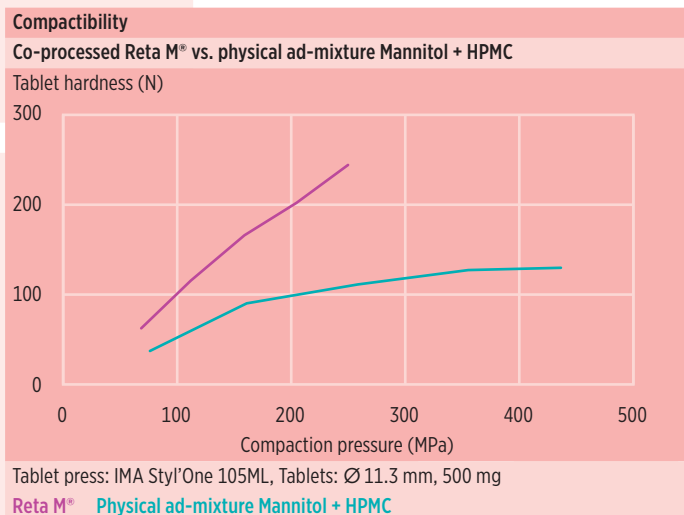
### Packaging, storage, shelf-life

Reta M<sup>®</sup> comes in a 15 kg carton box, while pharmaceutical PE-EVOH-PE inliner is being used as primary packaging with a shelf life of 24 months.

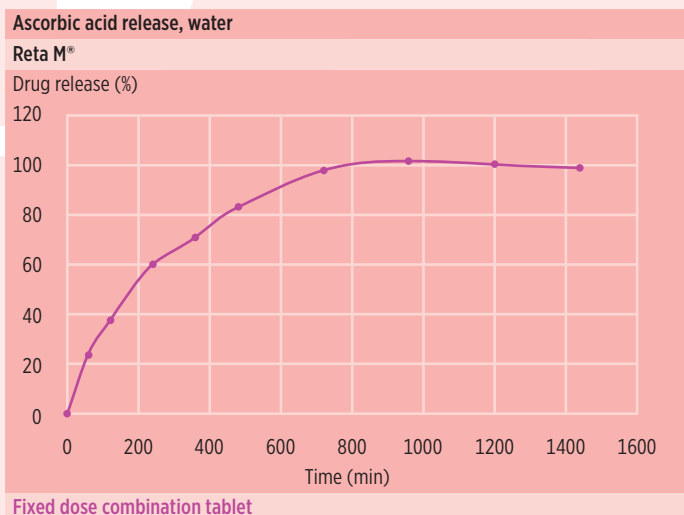
**MEGGLE's first lactose-free product Reta M<sup>®</sup>:  
Co-processed excipient enabling sustained release  
formulation through direct compression.**



Typical cumulative PSD and distribution density of MEGGLE's Reta M<sup>®</sup>



Comparison of compactibility - Reta M<sup>®</sup> against its physical ad-mixture, made up of 50% Mannitol and HPMC alike.



Fixed dose combination tablet 22 x 10 mm oblong. Vitamine C (300 mg), Zinc gluconate (105 mg - 15 mg Zinc), Histidine (100 mg), Reta M<sup>®</sup> (485 mg), Magnesium stearate (10 mg), Aerosil (5 mg)