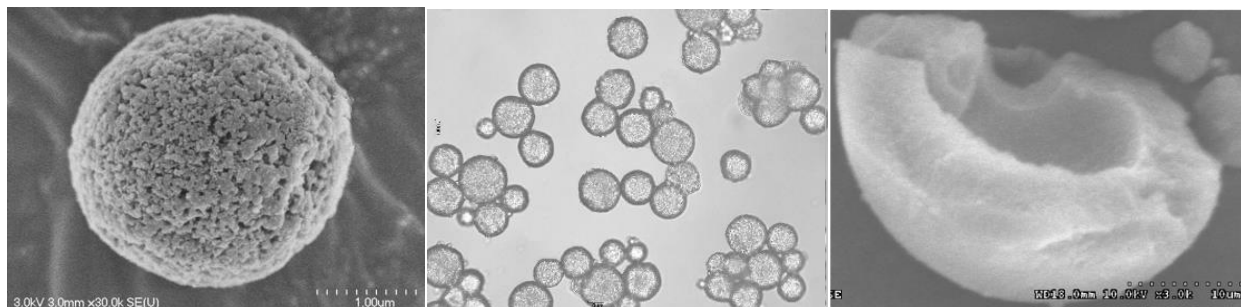


## MICRO ENCAPSULATION - MAT424 SERIES

### MICROCAPSULES

#### DESCRIPTION

Materium has developed an innovative technology which allows the encapsulation of different active agents inside silica microcapsules for extended release in specific applications (cosmetics, perfumes, textiles, chemical industries, etc.). Due to the softness and versatility of our process, various sensitive active agents including cosmetic oils, essential oils, lotions, catalysts and even proteins can be successfully handled. We also offer encapsulation services for inorganic and metallic particles (e.g. encapsulation of magnetic nanoparticles or silver nanoparticles in silica).



#### PROPERTIES\*

- Microcapsules composed of amorphous silica
- Safe and biocompatible material
- Soft and versatile encapsulation process
- Possibility to encapsulate different active agents including cosmetic oils, phase change materials, polymer additives, catalysts, proteins, etc.
- Possibility to encapsulate different inorganic and metallic particles (magnetic particles, silver, etc.)
- High loading rates (up to 80-90% for cosmetic formulations and essential oils)
- Different particle sizes available (ranging from 500 nm to 100 µm)
- Hollow mesoporous silica particles (pore size ranging from 2-50 nm)
- High surface area (>100 m<sup>2</sup>/g)
- Silica microcapsules can be covered with polar or non-polar chemical groups
- The encapsulated product can be supplied in the form of powder or a dispersion in water or another desired organic solvent

*\*Values stated in this technical data sheet represent typical values as not all tests are run on each lot of material produced. For formalized product specifications, please contact us.*