

## OUR SOLUTIONS FOR YOUR NEEDS

You have our word. Please do get in touch with us.

We are happy to make time for you to jointly discuss how WACKER solutions can optimize your products.

You can send us an e-mail to: [info.biosolutions@wacker.com](mailto:info.biosolutions@wacker.com)  
Or call us: **+49 89 6279-1565**

CAVAMAX® Cyclodextrins: Basic Specifications		
Product	Type	Grade
CAVAMAX® W6	α-Cyclodextrin	Standard / food / pharmaceutical
CAVAMAX® W7	β-Cyclodextrin	Standard / food / pharmaceutical
CAVAMAX® W8	γ-Cyclodextrin	Standard / food / pharmaceutical
CAVASOL® W6 HP	hydroxypropyl-α-Cyclodextrin	50% technical solution
CAVASOL® W7 HP	hydroxypropyl-β-Cyclodextrin	Standard / pharmaceutical / 40% technical solution
CAVASOL® W8 HP	hydroxypropyl-γ-Cyclodextrin	Standard / pharmaceutical
CAVASOL® W7 M	methyl-β-Cyclodextrin	Standard / pharmaceutical / 50% technical solution

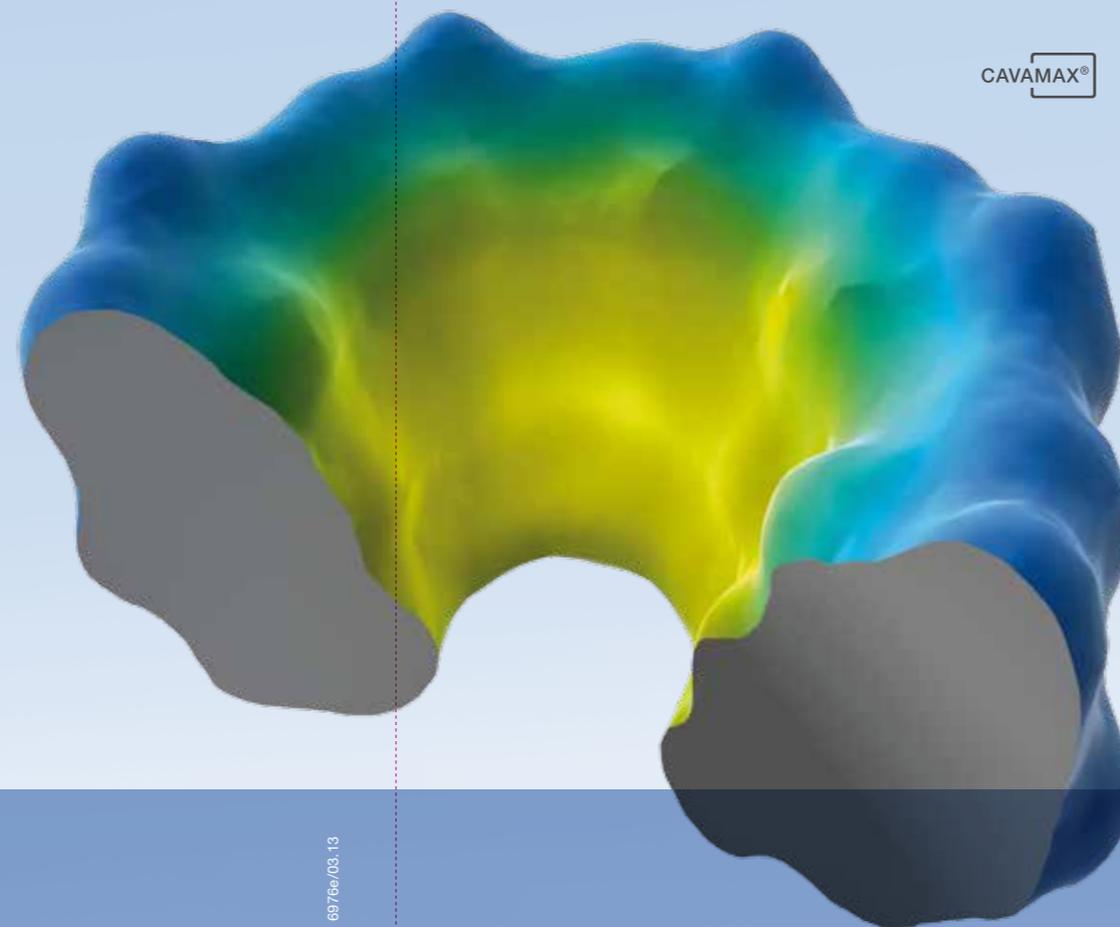
CAVAMAX® Cyclodextrins: Registration Status					
Product	ELINCS	TSCA	MITI	NDSL	AICS
CAVAMAX® W6	●	●	●	●	●
CAVAMAX® W7	●	●	●	●	●
CAVAMAX® W8	●	●	●	●	●
CAVASOL® W6 HP		●			
CAVASOL® W7 HP	●	●			●
CAVASOL® W8 HP					
CAVASOL® W7 M	●	●	●	●	●

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**WACKER**

CREATING TOMORROW'S SOLUTIONS

CAVAMAX®



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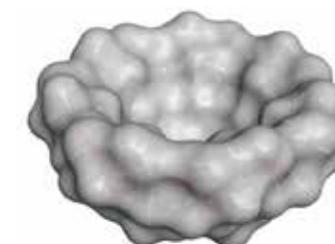
The data presented in this brochure are in accordance with the present state of our knowledge but do not absolve the user from carefully checking all supplies immediately on receipt. We reserve the right to alter product constants within the scope of technical progress or new developments. The recommendations made in this brochure should be checked by preliminary trials because of conditions during processing over which we have no control, especially where other companies' raw materials are also being used. The information provided by us does not absolve the user from the obligation of investigating the possibility of infringement of third parties' rights and, if necessary, clarifying the position. Recommendations for use do not constitute a warranty, either express or implied, of the fitness or suitability of the product for a particular purpose.

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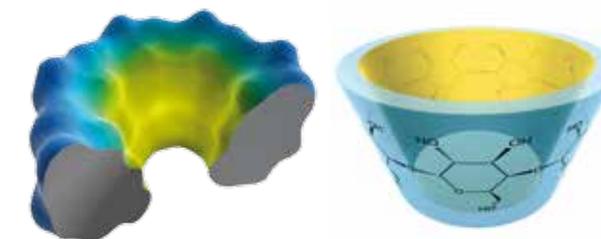
## DISCOVER CAVITY CHEMISTRY

## CAVITY POTENTIALS FOR ADVANCED CHEMISTRY

### Principle of a CAVAMAX® Cyclodextrin Molecule



Computer drawing<sup>1</sup> of a CAVAMAX® W7 β-cyclodextrin with molecular structure.



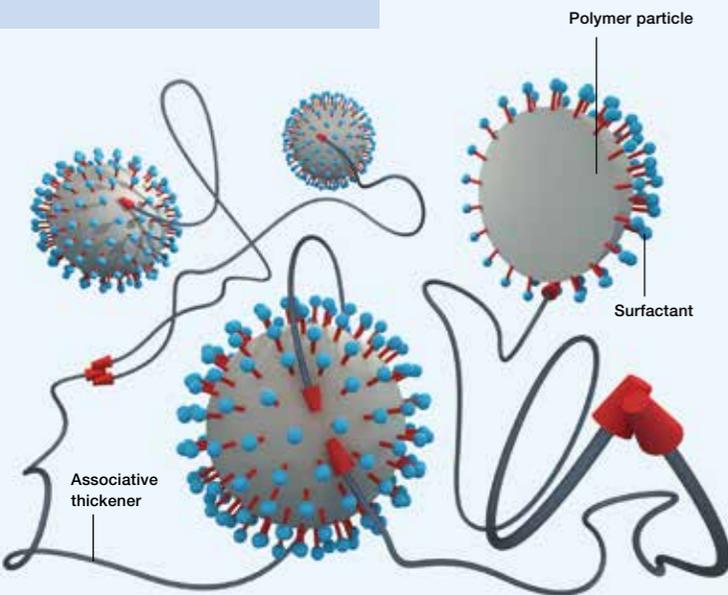
Schematic drawings of a CAVAMAX® W7 β-cyclodextrin with hydrophobic cavity and hydrophilic exterior.

The molecule forms a hydrophobic cavity. Lipophilic moieties are preferred guests and can be captured, protected, transported and stabilized.

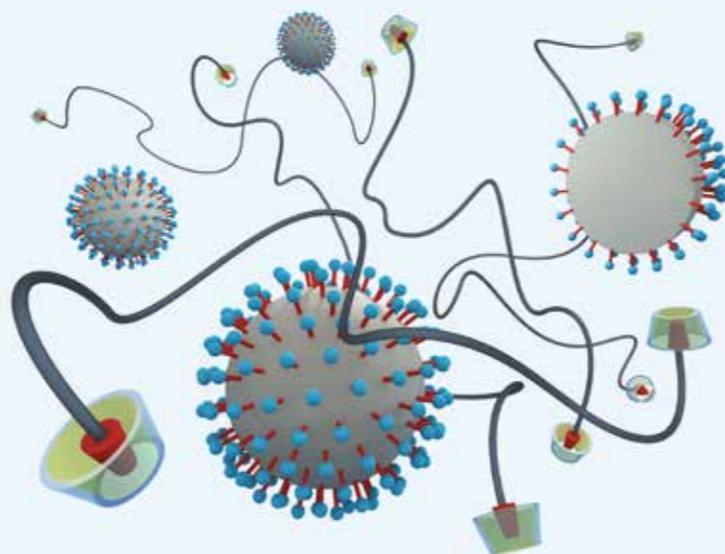
The size of the cavity can be selected according to the specific requirements of the application. WACKER offers three sizes of CAVAMAX® cyclodextrin cavity to provide a solution to any need. The solubility of the cavity-containing cyclodextrins can be adjusted by derivatization.

<sup>1</sup>Made with Materials Studio® from accelrys®

### Associative Thickener in Action



### Deactivation after Addition of CAVAMAX®



## REACTION CONTROL

Hydrophobic substances can be transported within the cavity to facilitate reactions in aqueous environment.

The cavity is thus able to influence reaction parameters by transporting hydrophobic reactants into the reaction or masking products.

By solubilizing monomers, cavity chemistry enables emulsion polymerization reactions. Hydrophobic parts of the monomers are incorporated in the cavity while the vinyl unit remains freely accessible for polymerization.

## CAPTURE & RELEASE

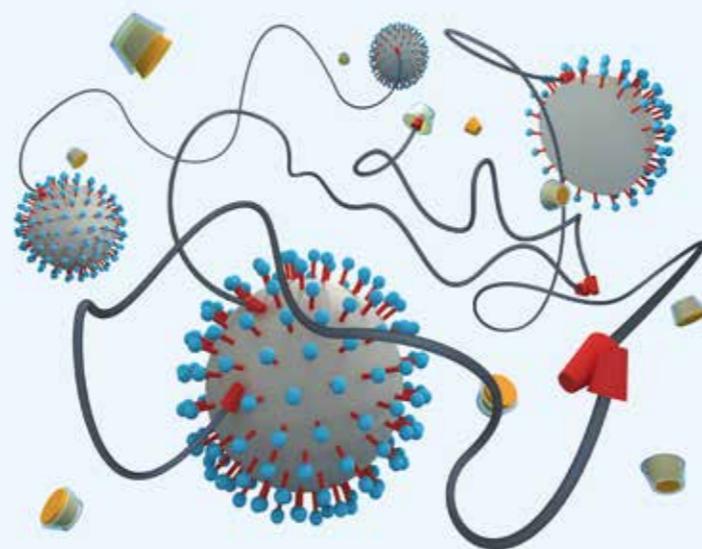
Many volatile organic compounds can be captured in the cavity. They are then trapped due to the high weight of the inclusion complex.

This means that bad odors or unwanted VOC substances can be adsorbed. Other applications of the cavity include moisture- or heat-controlled release of actives.

## RHEOLOGY CONTROL

The CAVAMAX® cyclodextrin cavity blocks the active hydrophobic centers of associative thickening agents (see picture above on the right side). This behavior can be used to fine-tune the thickening character of actives by partial blocking, or to neutralize it with equimolar volumes. Adding defined hydrophobic moieties blocks the cavity and reactivates the thickening agent again.

### Reactivation of Associative Thickener



### Exemplary Monomer Complex

