

# PRESS RELEASE

Number 6

## WACKER Uses Cyclodextrin Complexes to Develop Novel Method of Stabilizing Fragrances in Construction Applications

**Munich, January 29, 2007 – The Munich-based WACKER chemicals group has developed novel cyclodextrin/fragrance complexes for innovative construction-industry applications. Molecular inclusion in cyclodextrin stabilizes essential oils and/or their functional fragrances, allowing controlled release to the surroundings. Thus, for the first time, essential oils and other fragrances can be used in various non-hydrophobic construction applications, such as coatings and floor surfacings.**

Molecular inclusion in a suitable cyclodextrin is a new way to stabilize lipophilic fragrances such as essential oils. Until now, fragrances could not be used as construction coatings, because of their high volatility and chemical sensitivity. WACKER has now developed a system that protects the sensitive substances and continues releasing them after the coating has dried and set.

Complexing with cyclodextrin permanently stabilizes the active ingredient trapped in the cavity and offers it effective protection against oxidation, heat and chemical changes. Neither high shear stress nor temperature rises cause premature release of the fragrance. Only on contact with water is the fragrance released from

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the applied and set material in a controlled manner and over a long period of time.

Filed for a patent, WACKER's liquid and pasty aqueous dispersions containing cyclodextrin/fragrance complexes can be incorporated readily and evenly spread. In this way, plasters, paints, smoothing mortars and other coatings as well as sealants can be given an additional custom-made functionality. For instance, the fragrances used may act as growth inhibitors or bactericides/fungicides, or as animal and insect repellents. The complexes can be used indoors as repellents, too, or as air fresheners, thus enhancing the ambience of living quarters. For the first time, the construction sector can take advantage of the olfactory and biological potential of fragrances and avail itself of naturally occurring products.

### **Cyclodextrins**

Cyclodextrins are ring-shaped sugar molecules with an inner cavity in which they can trap substances such as oils, vitamins and fragrances. Cyclodextrins are therefore used in cosmetics, textiles, food, pharmaceuticals as well as personal and home care to disguise and thus eliminate unwanted odors, to improve active-ingredient solubility, or to increase aroma stability. This functional principle can now be put to service in the construction sector. The world's leading manufacturer of cyclodextrins and their complexes, WACKER FINE CHEMICALS produces and markets naturally occurring cyclodextrins under the trademark CAVAMAX®.

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**WACKER FINE CHEMICALS**

An expert in organic synthesis, silanes and biotechnology, WACKER FINE CHEMICALS supplies innovative biotech products and catalog chemicals for life science and consumer care customers worldwide. Its product portfolio includes cyclodextrins, cysteines, unnatural amino acids, complex organic intermediates, chiral actives, organosilanes, and various base chemicals. WACKER FINE CHEMICALS is also the ideal partner for the contract manufacturing of therapeutic proteins using microbial systems. The division's key customers include the pharmaceutical, agrochemical, household, personal care and food industries. WACKER FINE CHEMICALS has production sites in Germany and the USA. In 2005, the division posted sales of €111 million and has some 300 employees worldwide.

Find out more about WACKER's novel cyclodextrin/fragrance complexes at the European Coatings Show 2007, Hall 1, Booth 107.

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**The company in brief:**

WACKER is a globally active chemical company with some 14,400 employees and annual sales of around €2.76 billion (2005, IFRS-compliant). WACKER has 22 production sites and over 100 sales offices worldwide.

**WACKER SILICONES**

Silicone fluids, emulsions, rubber and resins; silanes; pyrogenic silicas; thermoplastic silicone elastomers

**WACKER POLYMERS**

Dispersible polymer powders and dispersions for applications in the construction industry; solid resins; surface coating resins; polyvinyl butyrals

**WACKER FINE CHEMICALS**

Fine chemicals, biologics and other biotech products such as cyclodextrins and cysteine

**WACKER POLYSILICON**

Polysilicon for the semiconductor and photovoltaics industries

**Siltronic**

Hyperpure silicon wafers and monocrystals for semiconductor devices