

# 與基材化學反應結合試驗報告



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Datum

21.09.2006

## ADVISORY OPINION

### Chemical setting of silicate paint „KEIM Royalan“

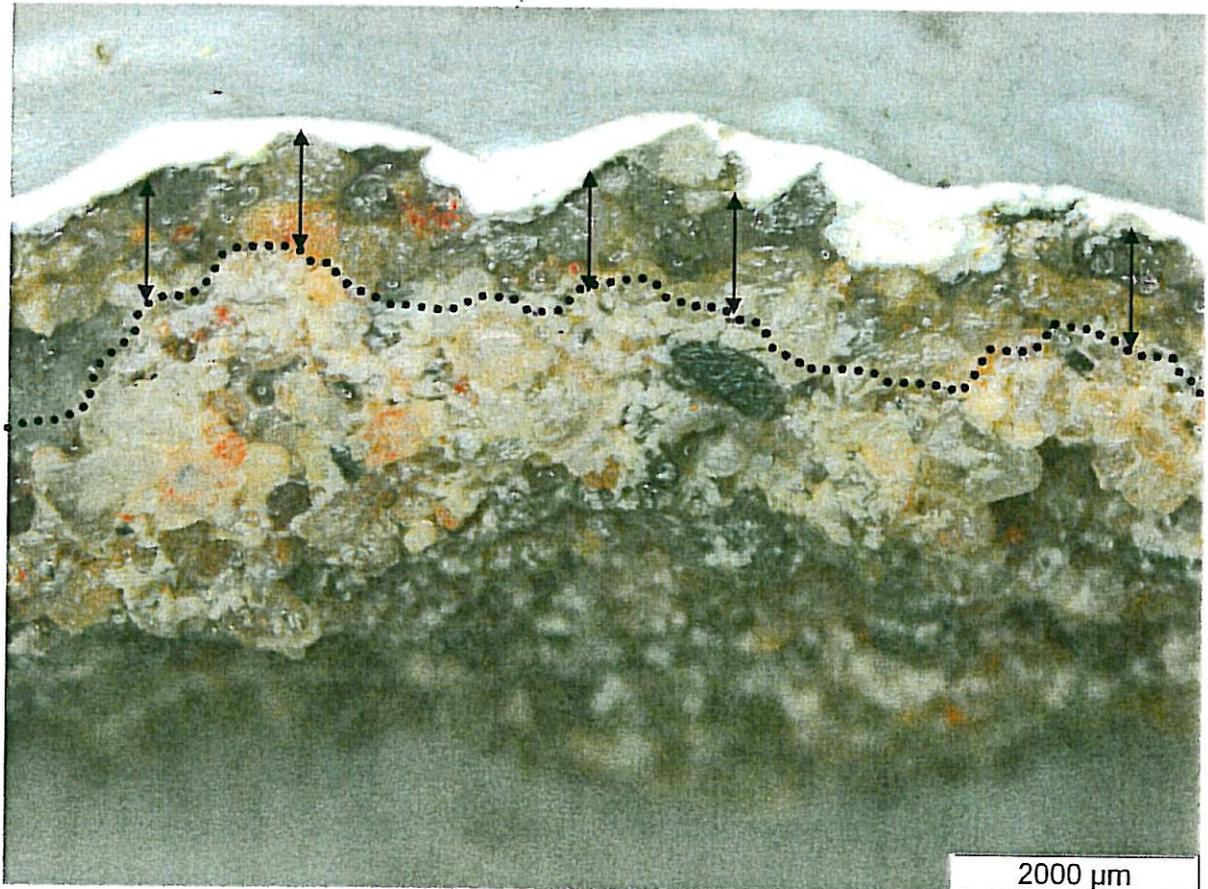
The setting principle of the façade paint KEIM Royalan is to be examined.

The product KEIM Royalan is a silicate façade paint. The main binder is potassium water glass. If the liquid potassium silicate is applied onto mineral substrates, it will penetrate into the substrate and form a bonding with the mineral reagents in the substrate by a chemical process. The result is a durable bond between paint and substrate.

### KEIM ROYALAN室外礦物塗料與基材起化學反應結合的測試證明

KEIM ROYALAN室外礦物塗料經過測試能與基材起化學反應結合的塗料。它的主要反應成分是矽酸鉀溶液（俗稱水玻璃），當矽酸鉀溶液塗佈於礦物基層，會滲透入表層並與礦物產生化學反應結合，這樣的反應會永久的將塗料與基層做結合。

Under the microscope the cross section of the coated render sample shows the "silicification zone" as dark coloured area.



Micrograph:  
Render and coating, cross section, 7-times enlarged

Finally, it can be confirmed that the façade paint KEIM Royalan forms a bonding with the mineral substrate by a chemical reaction of the binder potassium silicate (silicification). 可以確定是由於KEIM ROYALAN室外礦物塗料中矽酸鉀反應出矽化作用與基材產生的接着力

