

**TEST REPORT****Wacker Chemicals Middle East FZE**Dubai Silicon Oasis  
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Mail id :- [abbas.kanisan@wacker.com](mailto:abbas.kanisan@wacker.com)  
TCD – AK 11034-1Sample **PALADIN THERMAL INSULATION SYSTEM ( EIFS )**

## Customer

AL NASIR CONTRACTING W.L.L  
P.O. BOX 15858, MANAMA, BAHRAINDate **17 July 2014**Tested by **Dubai Technical Center****1 INTRODUCTION**

- The main scope of the project was to test sample of **Paladin Thermal Insulation System (EIFS)** for **Al Nasir Contracting W.L.L**, Manama, Bahrain as below.
  - a) Bond Strength on concrete slab as ETAG 004
  - b) Bond Strength on expanded polystyrene board as per ETAG 004
  - c) Impact Resistance as per ETAG 004
  - d) Water absorption as per ETAG 004
  
- Samples provided by the customer
  
- Test Conditions:  
**Temperature: 23 ± 2 °C, Relative Humidity: 50 ± 5%**
  
- Storage Conditions  
**Temperature: 23 ± 2 °C, Relative Humidity: 50 ± 5%**
  
- Water demand is approx. 22 %
- Test Date: 16.07.2014

## 2 TEST RESULTS

### 2.1 BOND STRENGTH (TENSILE ADHESION STRENGTH) ON CONCRETE

Storage	Bond Strength Mean (N/mm <sup>2</sup> )
Condition 1	0.65
Condition 2	0.53
Condition 3	0.62

Condition 1 : 28 Days Standard Condition (Temp: 23 ± 2 °C,R.H 50 ± 5%)

Condition 2 : 28 Days Standard Conditions + 2 Days Water Immersion + 2 hours Drying

Condition 3 : 28 Days Standard Conditions + 2 Days water Immersion + 7 days Drying

### 2.2 BOND STRENGTH (TENSILE ADHESION STRENGTH) ON POLYSTYRENE (EPS) BOARD

Storage	Bond Strength Mean (N/mm <sup>2</sup> )
Condition 1	0.17
Condition 2	0.12
Condition 3	0.16

Condition 1 : 28 Days Standard Condition(Temp: 23 ± 2 °C,R.H 50 ± 5%)

Condition 2 : 28 Days Standard Conditions + 2 Days Water Immersion + 2 hours Drying

Condition 3 : 28 Days Standard Conditions + 2 Days water Immersion + 7 days Drying

### 2.3 IMPACT RESISTANCE (DROP TEST)

Impact Test	Passed (7 Joules)
(> 3 Joules - Pass, < 3 Joules - Fail)	

### 2.4 WATER ABSORPTION

Water Absorption acc. DIN 52617	Mean Value	0.10
[kg/m <sup>2</sup> .h <sup>1/2</sup> ]		

### 3. CONCLUSION

- Bond Strength: The bond strength of the sample **complies** with the minimum requirements of ETAG 004 which is  $\geq 0.08 \text{ N/mm}^2$  on EPS and  $\geq 0.25 \text{ N/mm}^2$  on concrete.
- Impact Resistance (Drop Test): Impact resistance test of the sample **complies** with minimum requirement of ETAG 004 which is  $3 \geq \text{Joules}$ .
- Water Absorption: Water absorption of the sample **complies** with minimum requirement of ETAG 004 which is  $\leq 0.5 \text{ kg/m}^2 \cdot \text{h}^{1/2}$

  
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TECHNICAL SERVICE MANAGER  
CONSTRUCTION POLYMERS

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