



Test Report N. GM/1.2018

Gresmanc Internacional S.L..  
Ctra. De Consuegra Km. 1,200  
45470 Los Yébenes (Toledo)  
Espana

**Test: testing of degradation of NO<sub>x</sub> in air on a Favemanc sample**

Milan 05/04/2018

Date of receipt	16/03/2018
Analysis start date	26/03/2018
Analysis end date	28/03/2018
Material	Ceramic Materials
Sample name	<b>Ceramic Tile Favemanc</b>
Test information	<ul style="list-style-type: none"><li>• Test of photodegradation of NO<sub>x</sub> in air.</li><li>• Tested sample: collected and cut in a 2x20 cm sample from an original slab, intact in all its parts, randomly chosen from a production batch.</li><li>• Pre-treatment methods: in accordance with ISO 22197-1, the sample was UV-A irradiated for 6 hours and then immersion in deionized water for 2 hours.</li><li>• Light source: UV-A Jelosil 500, intensity 2.0 mW/cm<sup>2</sup>.</li><li>• Exposure time: 6 h.</li><li>• Initial concentration of NO<sub>x</sub>: 1000 ± 100 ppb in synthetic air.</li><li>• Type of reactor: for research purposes. Results published in international scientific journals <sup>1,2,3,4</sup>.</li><li>• Analytical method: chemiluminescence (SERINUS 40).</li><li>• Reproducibility: the measurement was</li></ul>

<sup>1</sup> J. Phys. Chem. C 111 (2007) 13222

<sup>2</sup> Nanoscale Research Letters 4 (2009) p.97

<sup>3</sup> Cement and Concrete Composites, 36 (2013) 116-120

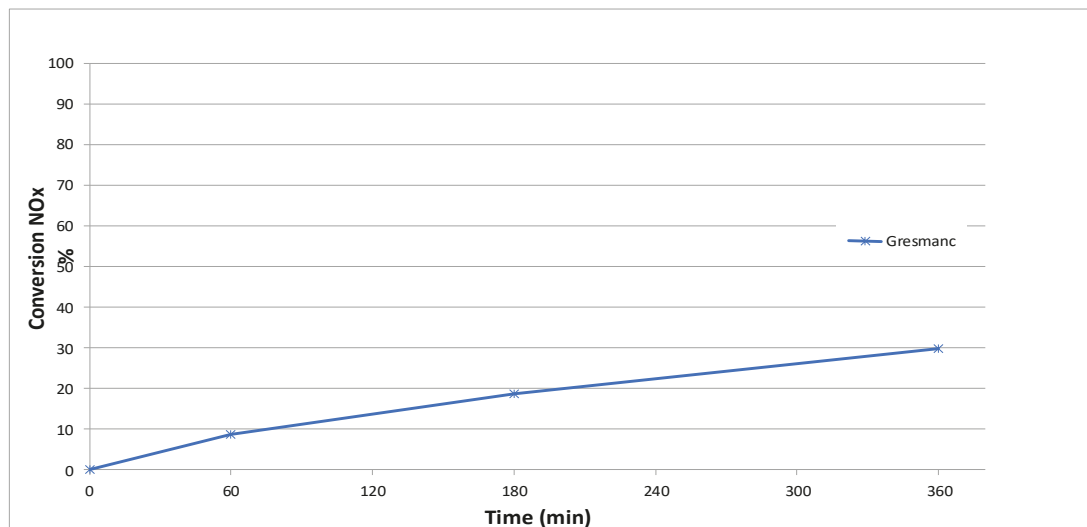
<sup>4</sup> Chemical Eng J, 261, (2015) 76-82



	repeated on no. 3 samples, randomly chosen from # 5 different samples. <input checked="" type="checkbox"/> Sampling made by customer.
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## Results

The performance towards the degradation of NO<sub>x</sub> for the material under test is here reported.



## Conclusions

The Favemanc Ceramic Tile appears to be **slightly active in the photocatalytic degradation of NO<sub>x</sub> in air**. In reference to the experimental data obtained after 6 hours of testing, the percentage of degradation of NO<sub>x</sub> is equal to **29%**.

The Scientific Director

Prof. Claudia Letizia Bianchi