UNIVERSITÀ DEGLI STUDI DI MILANO
Dipartimento di Chimica
Laboratorio di Processi e Impianti chimici per la Chimica Industriale

Test Report N. GF/2.2023

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Test: NOx abatement tests from air on Active Surfaces White CS

Milan, 04/09/2023

Date of receipt	17/07/2023
Analysis start date	19/07/2023
Analysis end date	26/07/2023
Material	Ceramic Materials
Product	Ceramic slabs in porcelain gres
Sample	**Active Surfaces White CS**
Test information	• Photodegradation tests of nitrogen oxides (NOx) in air • Tested sample: a 2x20 cm strip cut from an original slab, intact in all its parts, randomly selected from a production batch • Pre-treatment procedure: according to ISO 22197-1 standard, the sample was irradiated under UV-A lamp for 6 hours, followed by immersion in deionized water for 2 hours • Light source: LED lamp, with zero emissions in the UV region. Light intensity: 800 lux • Exposure time: 6 hours • Initial NOx concentration: 500 ± 100 ppb in synthetic air • Reactor type: laboratory research reactor. Results published in international scientific journals[1234] • Analytical method: chemiluminescence (SERINUS 40) • Reproducibility: the measurement was repeated on 5 samples, each cut and randomly selected from 5 different slabs

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Conclusions

The porcelain stoneware slab **Active Surfaces White CS** was found to be effective in the photocatalytic degradation of nitrogen oxides (NOx) present in air under LED illumination.

Based on the data obtained after 6 hours of testing, the percentage of NOx degradation is **64.0%**.

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