



UNIVERSITÀ DEGLI STUDI DI MILANO

Dipartimento di Chimica Fisica ed Elettrochimica

Spett.le

Graniti Fiandre S.p.A

Via Radici Nord, 112

42014 Castellarano (RE)

Object: comparison between the photocatalytic efficiency of 100 m² of White Ground Active tiles and the natural adsorption properties of trees in the NO_x removal.

It is well-known from literature that trees, in particular their leaves, can adsorb and store pollutant molecules such as CO, SO₂, ozone and NO_x from air. On this topic it is possible to take into account two main papers: the “Executive Summary”, published in 1994, reporting one year data obtained monitoring the air quality of the whole urban and suburban Chicago area [USDA Forest service Gen. Tech. Rep. NE-186 (1994)], and the paper by Wellburn on New Phytologist [139 (1998) 5].

In both papers, the final results demonstrate unambiguously that trees leaves are able to adsorb NO_x. More specifically, the adsorption efficiency of the leaf surface was estimated to be equal to 3,8 μl/dm² h for NO and 22,3 μl/dm² h for NO₂ [New Phytol. 103 (1986) 199].

On this basis, comparing the above reported data with those experimentally obtained in the NO_x photodegradation using White Ground Active tiles, it is possible to claim that:

100 m² of White Ground Active tiles degrade an amount of NO_x in 6 h
equal to the daily job of about 30 trees,
estimated to be the same as 22 m² of foliage.

To the best of my knowledge and belief,

Prof.sa Claudia L. Bianchi

Milano, 11 ottobre 2011