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TILE COUNCIL OF NORTH AMERICA LABORATORY ANNOUNCES RESULTS OF RESEARCH PROGRAM WITH PHOTOCATALYTIC TILES FROM STONEPEAK CERAMICS, PART OF THE GRANITIFIANDRE GROUP

Tile Council of North America (TCNA), in collaboration with StonePeak Ceramics and Centro Ceramico Bologna, recently completed a research program with photocatalytic tiles produced through an innovative technology developed by StonePeak Ceramics.

According to Dr. Jennifer Ariss, a research scientist at TCNA, the effects of titanium dioxide as a photocatalyst are well-established in the scientific literature. "Generally its use can provide a meaningful reduction in organic and inorganic pollutants, self-cleaning properties through a reduction in water surface tension, and important anti-microbial and anti-fungal properties." She further added, "Photocatalysis is a simple chemical reaction, requiring only light and water to be activated."

TCNA's Product Performance Testing Laboratory, in cooperation with Centro Ceramico Bologna, conducted research on three fronts: Reduction of nitrogen oxides (a major component of urban air pollution); reduction of organic pollutants as measured by the indigo carmine test; and inhibition of bacterial growth. Tiles treated with a micrometric titanium dioxide layer developed by StonePeak Ceramics were tested along with control samples provided by StonePeak Ceramics and TCNA.

Using a closed chamber study according to a recognized protocol, a 70% reduction of nitrogen oxides was observed. In evaluations of antimicrobial properties using the photocatalytic StonePeak Ceramics tiles, up to a 60% reduction of *E. coli* bacteria was observed compared to traditional porcelain surfaces. A 30% reduction on average of organic pollutants was observed in indigo carmine testing.

While titanium dioxide photocatalytic technology is employed in many industries, the methods of its application are often nanotechnology-based, which can pose considerable environmental and health hazards in the manufacturing process. According to Centro Ceramico Bologna, the novel technology of StonePeak Ceramics using a micrometric application minimizes problems associated with previous application techniques for photocatalytic materials and increases the effect of the surface layer.

"Our lab is very pleased to present promising results from our testing of this new technology invented by StonePeak Ceramics. The potential benefits of photocatalytic tile products include improved air quality, cleanability and sanitation," commented TCNA Executive Director, Eric Astrachan.

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