The Fred D. Thompson U.S. Courthouse in Nashville, TN, pictured above, is the largest TX Active project to-date in the world.

A pioneer in sustainability

Heidelberg Materials uses its combined forces to lead the field in decarbonizing the industry. Developing sustainable and intelligent heavy building materials, we provide the **Material to build our future.**

TX Active®: good, clean design

TX Active photocatalytic cement was first used in 1996, in the production of the three graceful precast concrete panels that form the “sails” of the landmark Dives in Misericordia Church in Rome, designed by Richard Meier (pictured on reverse).

Since then, our research, development and improvement efforts have been an intensive, ongoing focus. Early photocatalytic cements were effective in keeping surfaces clean; the levels of photoactivity achievable with TX Active cement is such that it actually abates the organic and inorganic substances responsible for air pollution.

For more than a decade, our technology center has studied photocatalysis and its application in cementitious materials. Among our findings: cementitious materials represent the ideal solution for photocatalytic reactions to be spread widely and evenly over both the horizontal and vertical surfaces of architectural and structural elements.

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Material to build our future

Photocatalysis: the power of light

Photocatalysis is a natural phenomenon in which substances known as photocatalysts accelerate the oxidation processes that occur in nature. This promotes faster decomposition of pollutants and prevents them from accumulating.

Ever-increasing air pollution in urban areas has compelled researchers to take advantage of photocatalysts to abate the noxious substances that contaminate the environment.

Simply by using light energy from the sun, photocatalysts accelerate the formation of strong oxidizing reagents, which result in the decomposition of organic and inorganic pollutants. For over a decade, photocatalysis has been applied to various materials—glass, ceramics, and cementitious binders—to obtain a "self-cleaning" effect.

Architecture in a whole new light

TX Active cement was originally developed to achieve Richard Meier's strict design specifications for his Dives in Misericordia Church. The goal was to provide pure, white, eye-opening brilliance with aesthetic qualities that will endure throughout the ensuing decades.

Since then, TX Active has been the cement of choice for many prestigious architectural projects in which the quality of materials and final appearance were equally important in achieving the architect's vision. In addition to providing traditional concrete performance, concrete produced with TX Active cement offers "self-cleaning" properties that help retain the structure's original beauty for years.

Preserving the environment

TX Active's photocatalytic properties help protect the environment by abating noxious substances produced by activities such as industry, transportation and residential heating systems. It can be used anywhere cement-based products are used, including:

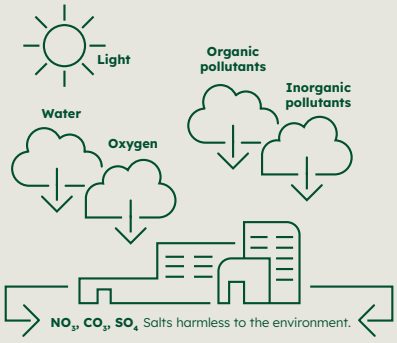
Horizontal structures

- Interlocking concrete pavers
- Concrete pavements
- Concrete overlays
- Concrete roof tiles
- Concrete sidewalks
- Pervious concrete

Vertical structures

- Architectural precast panels
- Tilt-up concrete panels
- Cladding elements
- Noise and safety barriers for roads and highways
- Concrete median barriers

Dives in Misericordia Church in Rome



Architecturally Beautiful

Microorganisms, combined with the accumulation of fats, particulate matter and rain, are primarily responsible for the gradual soiling and dulling of facade appearances. The photocatalytic properties of TX Active work to keep surfaces clean and maintain a consistent brilliance.

The aesthetic qualities of concrete elements, whether prefabricated or cast in place, are dramatically enhanced by TX Active and remain in excellent condition for years.

Environmentally Responsible

When empowered with the photocatalytic properties of TX Active, concrete surfaces remain clean and effectively abate smog and many other urban pollutants.

Whether the applications are for horizontal structures, vertical structures or interior tunnels, TX Active represents an effective tool for fighting pollution while keeping concrete surfaces whiter and brighter.

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