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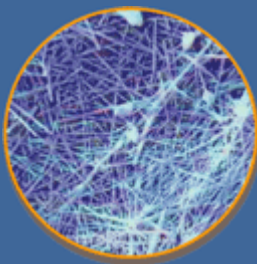
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FAST FACTS

The presence of Penetron Crystals in concrete protects concrete against chemical attack.



An intricate web of insoluble crystals forms in the presence of Penetron and H₂O creating a permanent protective seal

Internal Waterproofing for Concrete

Penetron Industry Newsletter

June 2007

Introduction:

Welcome to another edition of the Penetron Industry newsletter. Further illustrating the central theme of our last newsletter, extensive testing at the MFPA - Leipzig, Germany has clearly shown the ability of Penetron Admix to **self-heal** concrete cracks and joints. Artificially expanding cracks were put under water pressures up to 1 Bar and self-healed through the addition of Penetron Admix to the concrete. Read more in this edition's central feature below.



Penetron news: Penetron obtains BASTA registration, Sweden

According to a survey made by the Swedish Chemicals Inspectorate there are over 3,000 chemical substances in construction products. Approximately 35% of the chemical products used by the construction industry contain hazardous substances.

In 2003, the Swedish Environmental Research Institute joined forces with leading companies in the construction industry to form the BASTA system as a way to identify and eliminate the use of these highly toxic and dangerous chemical substances from construction products.

In the near future, the BASTA system will become an integral part of the European Union Chemicals registration system, REACH.

Penetron is pleased to be registered under the BASTA initiative as it is in keeping with one of our core goals of providing products that are safe to both humans and the environment.



Feature: Penetron Admix: Self-healing of concrete joints and cracks for the life of your structure!

When fresh concrete is placed onto cured concrete, the low adhesion strength to the existing concrete is a well known problem. These joints become the path of least resistance along which water easily penetrates through concrete structures. Moreover, as every professional in this industry witnesses on a daily basis, the formation of cracks (because of shrinkage and other causes) is almost inevitable.

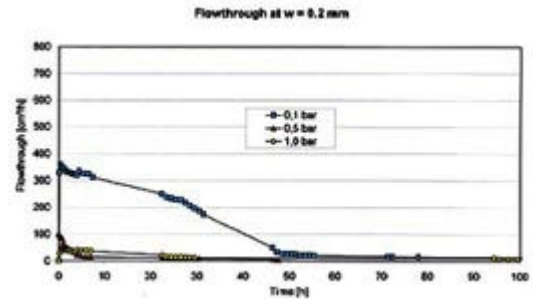
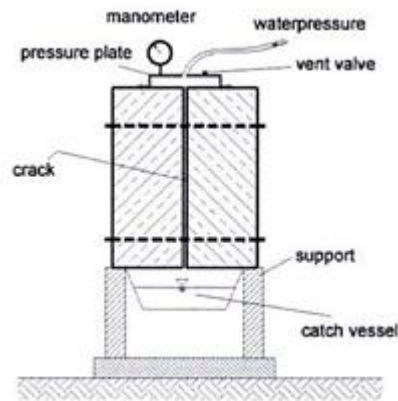
It has long been established in practice that the addition of 0.8 - 1% of Penetron Admix to concrete is a very effective way to halt water penetration through such weak areas. This ability has now been spectacularly demonstrated by a series of extraordinary tests at the MFPA in Leipzig, Germany.



Send to a friend or colleague.

As a part of these tests, fresh concrete containing 1% Penetron Admix was placed against cured concrete and after curing forced apart to a distance of 0.20, 0.25 and 0.30 mm over a period of time. At each of these intervals, a water pressure of 0.1 Bar was applied to the fracture causing water to flow through. Once the Penetron crystal growth had almost stopped the flow of water, the water pressure was increased to 0.5 Bar and then to 1 Bar.

At each of these intervals and pressures, the Penetron crystals worked effectively towards stopping the water flow.



In addition to the Penetron waterproofing system, we also offer Penebar SW , a range of self-expanding concrete waterstops, [click here to download the Penebar SW brochure](#).



Penetron Worldwide



MetroTorino - Turin, Italy

MetroTorino is Italy's first automated metro (VAL). A system of lightweight vehicles without drivers offering passengers a frequent service, that can be adjusted to different traffic volumes during rush hours, holidays, etc.

Using the latest innovations in underground construction MetroTorino features glass platform tunnels, which made it possible to build open plan stations with extra visibility between the different levels. 20 VAL208-Torino trains travel the 7.5km distance beneath the Corso Francia in just 11 minutes representing a novel and fast way of moving around town.

The construction of MetroTorino "Linea 1" started on 19th December 2000 and the first VAL train officially came into service at 12.10 pm of the 4th of February 2006 (just in time for the start of the Olympic Winter Games 2006).

The Penetron system was selected by a temporary company consortium set up by Systra and Geodata to waterproof all construction joints and concrete structure defects (leaking construction joint, cracks, concrete "bugholes") in all stations of "Linea 1".

The Penetron system convinced once again and Mr. Enrico Fornari, General Manager of the project for Systra and Geodata later confirmed the successful application and performance of Penetron in the construction joints of "Linea 1" in writing.

[Click here for recommendation letter MetroTorino](#)





North East Biofuels - New York

A new \$200 million dollar ethanol production facility called Northeast Biofuels located in Fulton, New York, is expected to be one of the largest ethanol production facilities in the United States .

Ethanol production plants are typically associated with locations in the Midwest states where the corn necessary for manufacture is plentiful. However, the developers and the project's supporters alike believe the New York facility will be a major part of ethanol's expansion beyond the Midwest corn-states. Northeast Biofuels estimates that it will use 41 million bushels of corn annually, most of it purchased from New York farmers, to produce 114 million gallons of ethanol. The ethanol will be marketed for use primarily in New York State and the Northeast as a clean burning, oil saving gasoline additive.

On her recent visit to the facility, Senator Hilary Rodham Clinton was quoted as saying, "Northeast Biofuels is a huge step towards the energy future of New York and the nation. This plant is not only good for consumers of oil and gas and for the environment; it also has important implications for the growth of the local economy."

Designed by Lurgi, a number of the concrete structures at this facility were approved to be treated with Penetron Admix to ensure that these critical components were properly protected from water intrusion and other damaging effects. Christopher Chen, Director of North American Sales and Marketing for ICS Penetron International stated, "In keeping with our corporate philosophy of environmental protection, Penetron is extremely proud to be a part of the construction solutions at Northeast Biofuels and its efforts to address the environmental mandate to reduce our nation's impact on our global climate."



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