



## The AMP World Headquarters Parking Structure

Harrisburg, Pennsylvania

DCI<sup>®</sup>  
S

## Lasting corrosion protection for truly long-term parking.



*“Many parking decks in the area had problems with localized corrosion. We needed to prevent patching of surface defects and areas of concern from the corrosion of steel. DCI was an excellent choice for corrosion protection.”*

Larry Saylor  
Scholl-Sower-Garner-Saylor

When AMP Inc., a leading electronic connectors firm, was building a new world headquarters, they needed a parking structure that was just as impressive.

The solution was an unusually distinctive design, with white cement, white sand and white stone utilized for the architectural spandrels and columns. But more than a structure that looked good, AMP needed a structure that was built to last.

Because parking structures in northern climates get repeated doses of de-icing salts, and cars laden with road salt drop salt onto the parking decks, stopping corrosion is a prime

concern. “Many parking decks in the area had problems with localized corrosion,” said the architect, Larry Saylor of Scholl-Sower-Garner-Saylor Architects. “We needed to prevent patching of surface defects and areas of concern from the corrosion of steel.”

The first step in providing protection against rebar corrosion and ensuring a successful job was choosing the right concrete supplier. With 75 years of experience, Nitterhouse Concrete Products was selected to assist in alleviating questions and problems in the design and bidding right from the start.

“By getting involved in the design of the pre-cast garage early, we were able to work with the design people to accomplish all their goals and still make it a cost-effective precast job,” said Nitterhouse’s Larry Shoemaker. “Working with Grace Construction Products, we recommended the mix and included Grace’s DCI® S in all of the pre-cast double tee deck panels for corrosion protection.”

DCI S Corrosion Inhibitor is unique because it protects steel chemically, not physically like epoxy or other additives. A calcium nitrite admixture, DCI S enhances steel’s naturally protective surface by converting ferrous oxide ions, which are vulnerable to chloride attack, into a fortified ferric oxide barrier. Its protective properties are the reason DCI products have been used for corrosion protection in hundreds of similar parking structures.

The 6,000 PSI mix also contained Daravair®, a liquid air-entraining admixture that provides freeze-thaw resistance, yield control, and finishability performance across a full range of concrete mix designs. In addition, the superplasticizer Daracem® 19 was included to give the mix extremely workable characteristics and very low water/cement ratio which is ideal for use in parking decks, prestress or precast concrete.

“Looking back, there’s nothing I can say we’d do any differently,” said Larry Shoemaker. “We achieved good color uniformity and aesthetics, cost-effectiveness and excellent corrosion protection.” Looking ahead, AMP has a structure it can expect to look and function well for years to come.



*AMP’s Parking Structure is designed to look good and built to last.*



*“Working with the architect, engineer and Grace, we were able to carefully consider the design and requirements of the structure to develop an appropriate mix.”*

Larry Shoemaker  
Nitterhouse Concrete Products

#### **Project Credits:**

Project: AMP World Headquarters  
Parking Structure, Harrisburg, PA

Architect: Scholl-Sower-Garner-Saylor,  
Carlisle, PA

Structural Engineer: Clapp & Holmes,  
Harrisburg, PA

Precast Concrete Supplier: Nitterhouse  
Concrete Products, Inc., Chambersburg, PA

General Contractor: Lobar, Inc.,  
Dillsburg, PA

**North American Customer Service: 1-877-4AD-MIX1 (1-877-423-6491)**

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W. R. Grace & Co.-Conn., 62 Whittemore Avenue, Cambridge, MA 02140 Tel: (617) 876-1400 Fax: (617) 498-4314

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