



Concrete Protector & Restorer

Concrete Sample—Flexural Cracks

The Problem

Concrete cracking is caused by stress. This stress is either construction related or service related. Flexural cracks develop from service or load related stresses that the hardened concrete experiences once placed into service.

Flexural cracks result from cyclic deflection loading such as a roadway or parking structure overpass that cracks in flexure from cyclic deflection loading from vehicular traffic.

Flexural cracks are usually deep cracks that can affect the structural integrity of the concrete. They are usually a wider crack than small surface or micro cracks and can allow in water and water borne salts readily.

Flexural cracks can be subject to rapid deterioration from weather effects.

Traditional methods to repair these cracks can be costly and time consuming, requiring special injection equipment and trained workers.

3M Concrete Protector & Restorer (CP&R) Solution

It is important when addressing these kind of cracks that the actual cause of the cracking be determined so that the appropriate product is used. CP&R cannot be used to restore structural strength to concrete that has cracked due to improper design, inadequate expansion joints or other structural problems that would be beyond the scope and intended purpose for CP&R products. Evaluation of the structure by a qualified licensed professional is essential to identify the problem and determine the appropriateness of a solution using CP&R products.

Since CP&R is a topical surface application with very low viscosity, it can penetrate into these cracks and fill them without using expensive techniques and specially trained workers. Some full depth cracks may require sealing from the under side to prevent CP&R from flowing through before it gels.

Some large cracks can be filled using a sand and CP&R mixture troweled and then the surrounding surface can be topically treated to complete the restoration and protection.

CP&R is available in high modulus products that develop compressive and tensile strength greater than typical concrete and in a low modulus product that accommodates some crack movement. The low modulus product has performed well under testing for stress/strain and deflection.

IMPORTANT NOTICE: This sheet was prepared as an introductory summary of the 3M product described herein. The information provided herein is based upon typical installation conditions and is believed to be reliable. However, due to the wide variety of possible intervening factors, 3M does not warrant that the expected result will necessarily be obtained. Details concerning product specifications and guarantee may be obtained from 3M. Specifications are subject to change. Sale of subject product(s) or system(s) is limited to 3M's and seller's conditions of sale INCLUDING THOSE LIMITING WARRANTIES AND REMEDIES.

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