



Concrete Protector & Restorer

Concrete Sample—Plastic Shrinkage Cracks

The Problem

- Concrete cracking is caused by stress. This stress is either construction related or service related.
- Plastic shrinkage cracks develop from construction related stresses.
- Plastic shrinkage cracks are cracks that appear on the surface of freshly placed concrete slab during finishing or soon after. They develop because of the internal stress resulting from shrinkage of the wet concrete mixture as it changes from the plastic state to the hardened state. As this change occurs, the volume of the concrete is reduced by the loss of water that was in the mix.
- There is evidence that all cement paste shrinks during early hydration which produces very small micro cracks. When the rate of evaporation is high and the concrete has enough strength to cause horizontal shrinkage, the normal micro cracking tendency is accentuated and noticeable plastic cracking may result.
- These cracks usually are parallel to each other 1 to 3 feet apart and 1 to 2 inches deep and rarely do they intersect the perimeter of the slab.
- Plastic shrinkage cracks do not usually affect the strength of the concrete, but can be the means for allowing water and waterborne salts into the concrete and can cause accelerated freeze/thaw damage.

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

- Since CP&R is a topical surface application with very low viscosity, it can penetrate into the tiniest micro cracks.
- Using CP&R as a topical application to fill and seal micro cracks can significantly extend the life of concrete.
- CP&R can be applied to large surfaces using simple equipment and your own crew for a fraction of the cost of other traditional repair or overlay methods.

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