Kimberly-Clark Plant Expansion

Corinth, MS, USA (2021)

PRODUCT USED:
Hard-Cem®

OWNER:	GENERAL CONTRACTOR:	READY-MIX SUPPLIER:	DISTRIBUTOR:
Kimberly-Clark	G.A. West & Co., Inc.	B & B Concrete Co., Inc.	M2 Solutions, Inc.

BACKGROUND

With an increased demand for and shortage in nonwoven paper products, such as diapers, tissues, and toilet paper, Kimberly-Clark needed to make time-sensitive expansions to their existing facility in Corinth, Mississippi. As a result, the company invested more than $140 million for these expansions, which was the largest investment the company had ever made for their nonwoven products division. The investment would go toward an initial plant expansion of 13,936 m^2 (150,000 ft^2), which would be followed by an additional expansion of 46,452 m^2 (500,000 ft^2). The concrete flooring for such an extensive development would need protection from the wear and tear of heavily abrasive machinery and equipment, however, as Kimberly-Clark could not afford to have their plant's production areas shut down.

SOLUTION

The plant's expansion construction team knew that giving their concrete flooring better resistance to abrasion would give it the protection it needed to mitigate future repairs for the plant and increase the concrete floor's service life. However, they needed the right solution. Many builders might have considered using a liquid hardening solution to attempt to increase abrasion resistance, but liquid hardeners only penetrate into the concrete's surface with a depth of 4–5 mm (0.2 in). That leaves the rest of the concrete at risk once the initial surface wear depth is gone.

Luckily, the team was aware of Hard-Cem, which has been proven to outperform all liquid hardeners and dry shake hardeners according to *ASTM C627* competitive testing. That's because Hard-Cem is an admixture, allowing it to harden the entirety of a concrete slab and ensure the slab has the longest service life possible. In short, Hard-Cem, a 2007 winner of the Most Innovative Product Award at the World of Concrete, was the right solution for this project. Before it could be applied, the construction team first conducted a trial pour to determine if Hard-Cem's color would blend well with the non-structural concrete, which wouldn't need or be treated with the admixture. The team eventually determined the finish, with both the team and Kimberly-Clark noting that the colors looked very good next to each other and weren't noticeably different. With the success of this trial pour and the superior abrasion resistance that Hard-Cem offered, the construction team added Hard-Cem to 1,774 m^3 (2,320 yd^3) of concrete flooring, ensuring that Kimberly-Clark's expansion floor would have a long-lasting service life.

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