

Scherer Inc.



Organization

Scherer Inc. is a leading designer and manufacturer of grain processing solutions for the milling industry.

Location

Sioux Falls, South Dakota, USA

Ready Mix Producer

Knife River

Structural Engineer

VAA Engineering

Contractor

Peska Construction Inc.

Product

Hard-Cem[®]

Application

110,000 ft² slab on grade

Durable & Sustainable Concrete for Scherer Inc.'s New Manufacturing Headquarters

Scherer's ready-mix producer Knife River found a win-win solution in Hard-Cem[®]

Since 1994 Scherer Inc. has steadily grown its position as one of the leading manufacturers and service providers in the milling industry. To house its growing workforce of over 75 employees, along with its manufacturing and service facilities, it needed a new headquarters in its hometown of Sioux Falls, South Dakota.

Due to the nature of its operations, Scherer required a highly resilient concrete floor that could withstand the abrasion and erosion that comes with operating and servicing heavy machinery on site during extreme weather conditions in summer and winter.



SMART CONCRETE[®]

Cost Savings

Initial savings with unrealized future savings on reduced repair and maintenance.

6x Better Abrasion & Erosion Resistance

Plus a 20-year durability warranty.¹

Lower Carbon Footprint

Up to 25% fewer CO₂ emissions than typical high-strength concrete mixes.

¹ Limited 20-Year Product Warranty. See website for details.

Challenges

The initial project plan called for a dry shake hardener to be applied to a 110,000 ft² concrete slab as a wear layer. However, concerns were raised about project delays as well as the worksite risks and overall efficacy of dry shake.

Project Delays

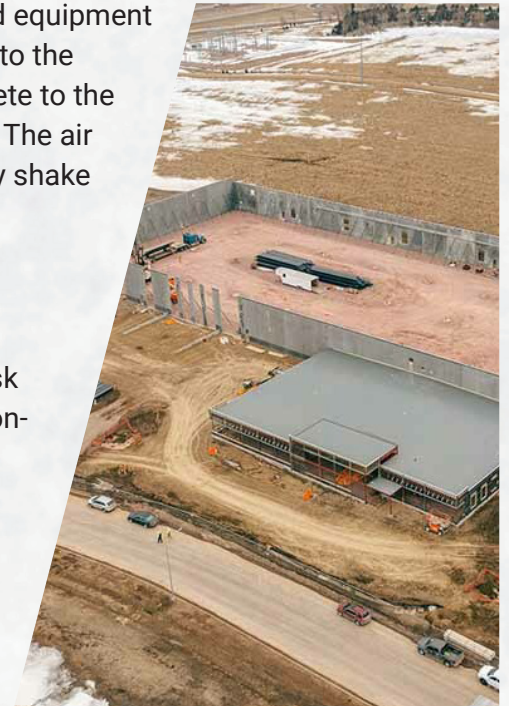
Since dry shake is applied post-concrete pour, additional skilled labor and equipment are required on site which cause project delays and add additional costs to the project. Furthermore, Knife River, the ready mix producer providing concrete to the project, would face constraints in their mix design when using dry shake. The air content would have to be minimal, as the power troweling process for dry shake could potentially damage the surface of the concrete.

Worksite Risks

OSHA requirements make it mandatory for all workers to wear approved respirators around dry shake applicators. This includes any workers at risk of dust exposure, not just those workers applying the shake. Fines for non-compliance are substantial.

Delamination

Because dry shakes are applied post-application and are not integral in the concrete mix, the risk of delamination and resulting repair and maintenance costs is high.



The Solution

Knife River sought an integral concrete admixture for abrasion and erosion resistance to replace the dry shake on Scherer's project. They also wanted to source a more eco-friendly alternative to align with both Scherer's and Knife River's sustainability objectives. Hard-Cem by Kryton was the obvious choice.

To ensure long-lasting abrasion and erosion resistance, 3,000 yd³ of Hard-Cem[®] was added to the concrete at the Knife River batching plant for use on Scherer's 110,000 ft² slab on grade floor.

Backed by 20 years of proven performance, Hard-Cem could enhance the durability of the concrete floor and significantly extend its lifespan without the drawbacks associated with dry shake hardeners.

Knife River has a silo at its plant in South Dakota, so it could easily store Hard-Cem to mix it directly into the concrete at the plant. Compared with the post-applied application of dry shake, Hard-Cem eliminates the need for special equipment and skilled labor and poses no threat of toxic chemicals.

This would result in cost savings, lower risk, and fewer maintenance requirements throughout the lifetime of the concrete. The stakeholders, including Scherer Inc. and their engineering firm, VAA, recognized the benefits of Hard-Cem.

Results

The adoption of Hard-Cem® over dry shake hardeners brought undeniable advantages to the project. It lowered the costs, increased the longevity of the concrete flooring, and lessened the project's environmental impact.

Lowered Costs

The use of Hard-Cem lowered the overall cost of the concrete floor for Scherer, while also providing a significant value-added sales opportunity for Knife River.

Increased Durability of Concrete

Hard-Cem significantly improves the performance of concrete, so it can withstand the harshest environments and heaviest traffic without requiring costly maintenance and repairs or downtime in Scherer's business.

Lower Carbon Footprint

Hard-Cem significantly lowers the embodied carbon emissions of Scherer's concrete floor by using less cement to achieve the same durability as high-strength concrete. Plus, since it improves the durability and longevity of concrete, it also reduces the need for carbon-intensive and costly repairs and maintenance in the future.



For more information, visit [Kryton.com](https://www.kryton.com)
or contact a Kryton representative at
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