

Roquette's New Pea Protein Plant

Portage la Prairie, MB, Canada (2020)

PRODUCT USED:
Hard-Cem®

OWNER:
Roquette

ARCHITECT:
AECOM

ENGINEER:
Hatch

GENERAL CONTRACTOR:
Graham Construction & Engineering Inc.

READY-MIX SUPPLIER:
Lafarge

DISTRIBUTOR:
Kryton International Inc.

BACKGROUND

Across North America, there has been a growing demand for products like plant-based proteins, which are not only healthy but are also able to cater to vegetarian and vegan tastes. To fulfill this need, Roquette, a leader in plant-based ingredients and plant proteins, has stepped up to construct the world's largest pea protein plant in Canada.

Once fully constructed in late 2020, this 67-acre state-of-the-art facility worth \$400 million will produce over 100,000 tons of peas. All of which will help create one of the more environmentally friendly sources of protein that could suit a wide variety of healthy diets. More specifically, pea protein is considered to be a great addition to vegetarian, vegan, gluten-free, sports, slimming, senior, and clinical nutrition.

However, it wouldn't be of use to anyone if it didn't have the right transportation system. Knowing this, Roquette decided to construct their plant in Portage la Prairie, Manitoba. This location would provide the company with access to both mature transportation infrastructure and skilled labor, allowing Roquette to deliver pea protein throughout North America. Before they could make use of this opportune area, however, they first needed to make sure their new pea protein plant would reliably function for years to come.

SOLUTION

That thought initially led Roquette to specify a dry shake hardener for the plant's transportation tunnels and 14 slabs. This was meant to give those areas an especially durable surface to survive years of wear and tear. However, it unfortunately came with a number of downsides. For one, the construction team needed to monitor its application and wear protection equipment while applying it, which was quite costly. It was also necessary as dry shake hardeners use silica dust, which can cause irreversible respiratory and eye damage to those without the right protection.



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To add to that complication, the concrete contractor was having a hard time getting the product to apply properly. As a result, after the first concrete pour, the concrete hardened before the dry shake hardener could be applied to the surface.

After witnessing these challenges with the dry shake hardener, the general contractor, Graham Construction & Engineering Inc., got in touch with Kryton to ask for the company's Hard-Cem admixture. Doing so allowed the construction team's ready-mix supplier to add the integral hardener to their concrete mix for the remaining concrete slabs that had yet to be poured, giving them the desired durability without any safety concerns or application issues.

