

FLOORING

Polyurethane Screed and Coating Systems

Construction

Market	Manufacturing Industry
Market segment	Food Industry
Sub-segment	Prepared Foods
Project	Les Aliments DANG NGOC Inc., Laval, Québec.
Products	Sikafloor® 20 PurCem^{CA}, Sikafloor® 29 PurCem^{CA} and Sikafloor® 31 PurCem^{CA}.
Existing situation	Water infiltration through cracks in the existing floor protection system caused the surface to breakdown prematurely in a blast freezer.
Challenge	Install a durable industrial floor that meets <i>Canadian Food Inspection Agency</i> requirements, while providing resistance to thermal shock, mechanical damage and chemical attack.
Solution	Sikafloor® 20 PurCem^{CA} polyurethane resin floor screed. Sikafloor® 31 PurCem^{CA} polyurethane flooring coating over Sikafloor® 20 PurCem^{CA} and Sikafloor 29® PurCem^{CA} for a smoother finish.

Hard as a rock... and shockproof! Sanitary, attractive and long-lasting!



Flooring installed in a blast freezer of a food manufacturing plant quickly deteriorated and needed to be replaced one year after installation. The original protection system did not withstand sudden changes in temperature caused by hot water washings. Cracks appeared around the floor drains allowing water infiltration under the coating causing the surface to flake and breakdown.

A new flooring system that met *Canadian Food Inspection Agency* requirements was needed. Other requirements included : resistance to thermal shock caused by sudden drops in temperature (from 20°C to -35°C within 30 to 60 minutes); high com-

pressive strength to support the weight of two conveyors used to move food products; resistance to pressure washing at approximately 43°C (110°F) using a chlorinated alkaline detergent (Blizzard).

The first step was to completely remove the existing failing floor coating. The exposed concrete was then decontaminated and prepared for the application of a new protection system. Workmen installed a 9 mm thick screed of **Sikafloor® 20 Purcem^{CA}** polyurethane resin flooring and a seamless sanitary cove base 400 mm in height made from **Sikafloor® 29 PurCem^{CA}**. The final layer consisted of a topcoat of **Sikafloor® 31 PurCem^{CA}**,

a polyurethane solvent-free coating spread over the entire floor area for a smoother finish. Moving joints in the floor were sealed using **Sikaflex® Primer 205** and **Sikaflex® 2c NS EZ Mix** polyurethane based elastomeric sealant.

The **Sika** solution not only provided a surface which meets *Canadian Food Inspection Agency* regulations, but one that is also resistant to thermal shock, high abrasion, impact and chemical attack.



Products used

Sikafloor®20 PurCem^{CA}

Three-component, high strength, coloured polyurethane resin floor screed.

- Improved thermal shock resistance.
- Excellent mechanical, abrasion and chemical resistance.
- Slip resistant.
- Easy to apply.
- Easily maintained.
- Does not support growth of bacterial fungus.
- *Canadian Food Inspection Agency and USDA* acceptances.

Sikafloor®29 PurCem^{CA}

Three-component, high strength, coloured polyurethane coving and detailing mortar.

- Excellent chemical resistance.
- Good mechanical and abrasion resistance.
- Easily maintained.
- Fast curing.
- Easy vertical application.
- Does not support growth of bacterial fungus.
- *Canadian Food Inspection Agency and USDA* acceptances.

Sikafloor®31 PurCem^{CA}

Three-component, solvent free, coloured, polyurethane coating which offers a very good resistance to abrasion and chemicals.

- High build coating with a mat finish.
- Increases hygienic performance of **Sikafloor®20, and 29 PurCem^{CA}**.
- Moisture tolerance.
- Easy to apply.
- Does not support growth of bacterial fungus.
- *Canadian Food Inspection Agency and USDA* acceptances.

Other related products

Sikaflex® Primer 205

One-component primer used for promoting adhesion of polyurethane sealants joints to various metallic, non-metallic and glass substrates.

- Easily applied by brush, dauber or spray.

Sikaflex®2c NS EZ Mix

Two-component, premium-grade, polyurethane-based, elastomeric sealant.

- Intended for use in all properly designed working joints with a minimum depth of 6 mm.
- Ideal for vertical and horizontal applications.
- Submerged environments, such as canal and reservoir joints.
- Capable of a $\pm 50\%$ joint movement.
- *Canadian Food Inspection Agency* acceptance.

Sikadur®32 Hi-Mod

Two-component, high-modulus, high strength, epoxy bonding adhesive.

- Structural adhesive for concrete, masonry, metal, wood, etc.
- Protective coating for reinforcing steel.
- Insensitive to moisture before, during and after use.
- Fast initial set; rapid gain to ultimate strengths.
- Excellent adhesion to most structural materials.
- Easy to mix: 1:1 ratio.



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