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Case study 1.0

FRANCESTLE CONFECTIONERIES, Flooring Solution

Francestle Confectioneries (M) Sdn. Bhd., established in 2008 in Klang, Selangor, Malaysia, is a leading chocolate and confectionery manufacturer. They produce multiple in-house brands including Alfredo, Checkers, Bernique, D'Cocoa and Chaumet and provide OEM and private label services for other businesses.

Franscastle Confectionery established a new production plant in a damp industrial area. Despite installing a damp-proof membrane during construction, subsequent inspection revealed inconsistent moisture levels across the slab, raising the suspicion of rising ground moisture.

Flooring solution required for 3,000 sqm of porous substrate in their production and warehouse area, which must withstand high traffic, heavy machinery, and strict hygiene standards inherent to foods manufacturing



The Moisture Challenge



Moisture in concrete is one of the most underestimated threats to resin flooring. Without proper treatment, excessive moisture can:

- Cause osmotic blistering and delamination of PU systems.
- Accelerate adhesion failure, especially under thermal and traffic stress.
- Trap microbial growth beneath the floor, creating hygiene concerns.
- Lead to premature floor failure, resulting in downtime and costly repairs.

It is often misunderstood that polyurethane flooring can withstand rising damp without special treatment. While PU-MF is highly durable against mechanical and chemical attack, it is still vulnerable if substrate moisture is uncontrolled. Therefore, a moisture management strategy was non-negotiable.

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Solution Implemented

1.

Chosen right primer as the bonding bridge between substrate and epoxy mortar.

Deep penetration sealed surface porosity and consolidated weak areas.

Solvent-free to prevent blistering and ensure low VOC for food environments.

Provided a tacky surface with extended open time, enabling mortar to be applied wet-to-wet for a strong chemical bond.



2.

Installed immediately over the tacky primer.

Created a seamless, dense underlayer with high compressive strength

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Solution Implemented

3.

Applied PORE SEALER to close residual porosity in the mortar. Prepared the surface for the PU-MF topcoat.



4.

Selected **FLOORCRETE PU-MF** for its outstanding suitability in food production areas: Seamless & hygienic, preventing bacterial growth. Excellent chemical resistance to sugars, oils, and cleaning agents. Thermal shock resistance to withstand hot water cleaning. High durability under traffic, impact, and abrasion.



5.

Coving & Wall Treatment

During coving installation, the wall plastering was found to be weak and prone to delamination. To minimize stress on the fragile plaster, a water-based epoxy coating was applied, ensuring both adhesion and long-term durability without damaging the substrate.



OUTCOME

The final 3,000 sqm flooring system successfully addressed both the moisture challenge and the operational requirements of a confectionery facility.

- The moisture barrier and solvent-free epoxy primer ensured long-term adhesion and eliminated the risk of osmotic blistering.
- The PU-MF finish delivered a hygienic, durable, and chemically resistant floor suitable for heavy-duty food production.
- The adapted wall solution resolved plastering weaknesses, maintaining coving integrity without structural damage.



Key Takeaways

- Moisture management is critical: even advanced PU-MF floors require protection against rising damp.
- The right primer makes the difference: solvent-free, wet-to-wet epoxy primer ensures maximum bond strength with epoxy mortar.
- Food facilities demand tailored solutions: from slab moisture to wall plastering, every detail must be engineered for long-term performance.

