

CASE STUDY - FOUNDATION WATER SEEPAGE INJECTION REPAIR

Residential home in Regina, SK



THE PROBLEM

A young couple recently purchased a starter home in Regina Sk and were concerned about a large crack in its foundation wall, causing persistent water seepage and subsequent interior water damage. Exterior repairs were deemed too expensive. The homeowner required a long-lasting, non-invasive method to eliminate water infiltration and safeguard the basement before completing their basement renovation.





THE SOLUTION

Eco Seal suggested using a one-part polyurethane sealant to effectively seal cracks in underground structures. The sealant's thin consistency enabled thorough penetration into the cracks, creating a waterproof barrier. The application involved a detailed six-step injection procedure.:

1. **Drilling:** Small-diameter holes were strategically drilled along the crack to intercept it and allow injection points.
2. **Injection Port Installation & Water Testing:** Ports were installed at drilled points and tested with water to confirm crack interception and flow paths.
3. **Injector Ports & Sealing:** The surface of the crack was sealed with hydraulic cement to contain the injection.
4. **Mixing & Testing:** The polyurethane sealant components were mixed, and small test batches were used to confirm reaction times and ensure optimal formation.
5. **Injection & Solidification:** Using a pump, the polyurethane sealant was injected, filling the entire crack from bottom to top, penetrating tight spaces, and forming a flexible, watertight seal.
6. **Port Removal & Patching:** Once the sealant was fully cured, the ports were removed, and the drilled holes were patched for a clean, finished appearance.



THE SUMMARY

The Eco polyurethane sealant injection successfully sealed the foundation crack, eliminating water seepage and restoring the lower level to a dry condition. The low-viscosity polyurethane sealant effectively permeated the crack, forming a long-lasting waterproof barrier. Unlike rigid repair materials, the flexible nature of the polyurethane sealant allows for minor foundation movement without compromising the seal. The use of a pump made the injection process efficient and precise. The project provided a non-invasive, cost-effective, permanent solution, preventing further water damage, giving the home owners peace of mind. This project delivered a lasting, affordable, and non-disruptive solution, halting additional water damage and ensuring homeowner confidence.

