Azo Grout™
project folio

AZON

Technology
Chemicals
Machinery

Azo-Grout™ polyurethane waterstop products

Water cut-off | Azo-Grout™ 424

Soil stabilization | Azo-Grout™ 443

Underground waterstop | Azo-Grout™ 458

Void filling and slab lifting | Azo-Grout™ 551

For use in sewers and manholes | Azo-Grout™ 675 (hydrophilic)

Structural repair | Azo-Grout™ 222, Azo-Grout™ 224, Azo-Grout™ 226

About the cover

The Chicago skyline photo commissioned for Azon by William Gnech of Apple Group Architectural Photography showcases many famous buildings, including several high-rises built within the past two decades that are equipped with energy-efficient aluminum windows that use the Azon unique thermal barrier polymer technology.

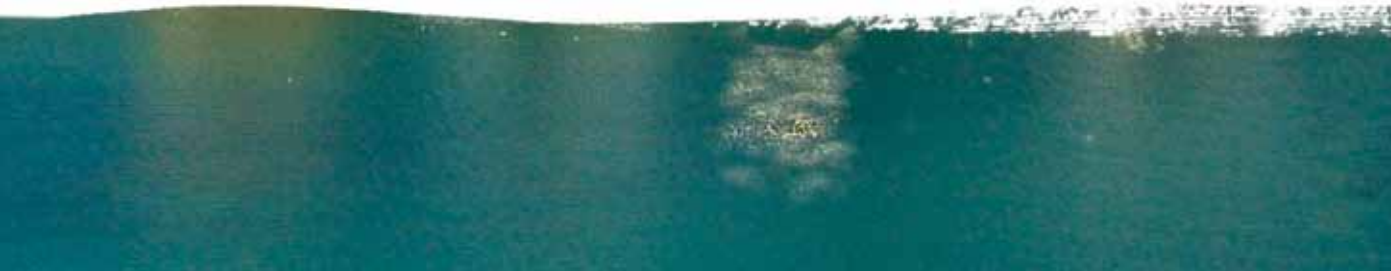
Azo-Grout™

By Azon

The project folio is a showcase of contemporary projects involving crack repairs in dams, reservoirs and manholes; deep soil stabilization excavations and void filling operations undertaken by our customers and contractors who use the full spectrum of products known as Azo-Grout™.

The dynamic display of solutions presented within this copy is a testament of the Azon polymer chemistry integrated into the Azo-Grout™ family of products for use in crack repair, soil stabilization and water-stopping for concrete, brick or mortar infrastructures in the most demanding environments and conditions.

Brilliant Dam, Castlegar, British Columbia



Water tank construction joint sealing

stops water leaks in cracks, joints and pipe seals | Azo-Grout™ 424

After several failed joint repairs at a water reservoir in Nova Scotia, the general contractor hired technical specialists from Multiurethanes to train his personnel in the use of special injection techniques to stop the leakage. Workers were finally able to seal off the tank's joints using Azo-Grout™ 424 and proper injection methods to create a dense, flexible foam joint seal.

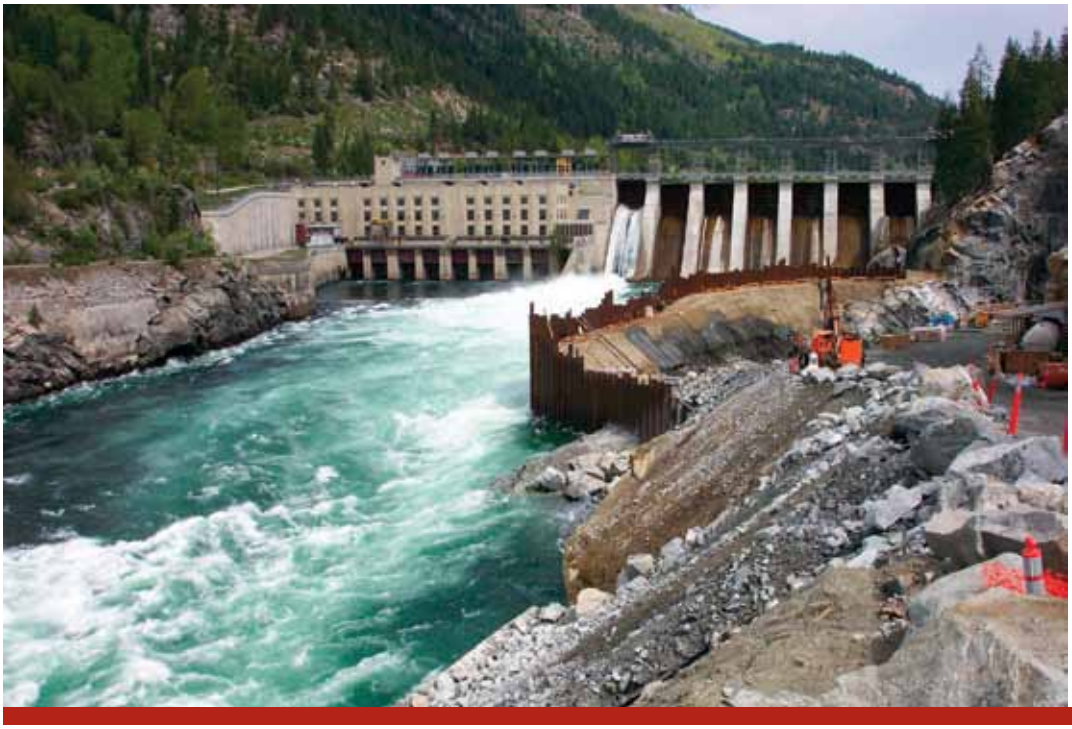
Project:	**Water tank repair**
Location:	**Dartmouth, Nova Scotia**
Distributor:	**Multiurethanes Ltd.**
Product used:	**Azo-Grout™ 424**

Crack and joint sealing

stops water flow in sewers and manholes | Azo-Grout™ 675

When a sewer pipe separated from a manhole structure, the sewer repair contractor took advantage of the soil stabilization properties of Azo-Grout™ 443 and the use of resin absorbent grout pads to stop a 50 gpm groundwater inflow. To solidify the manhole's pre-cast joints and prevent further seepage, contractors sealed the cracks with Azo-Grout™ 675.

Project:	**Manhole repair**
Location:	**Waterford, Michigan**
General contractor:	**Liquiforce**
Distributor:	**Multiurethanes Inc.**
Product used:	**Azo-Grout™ 675**

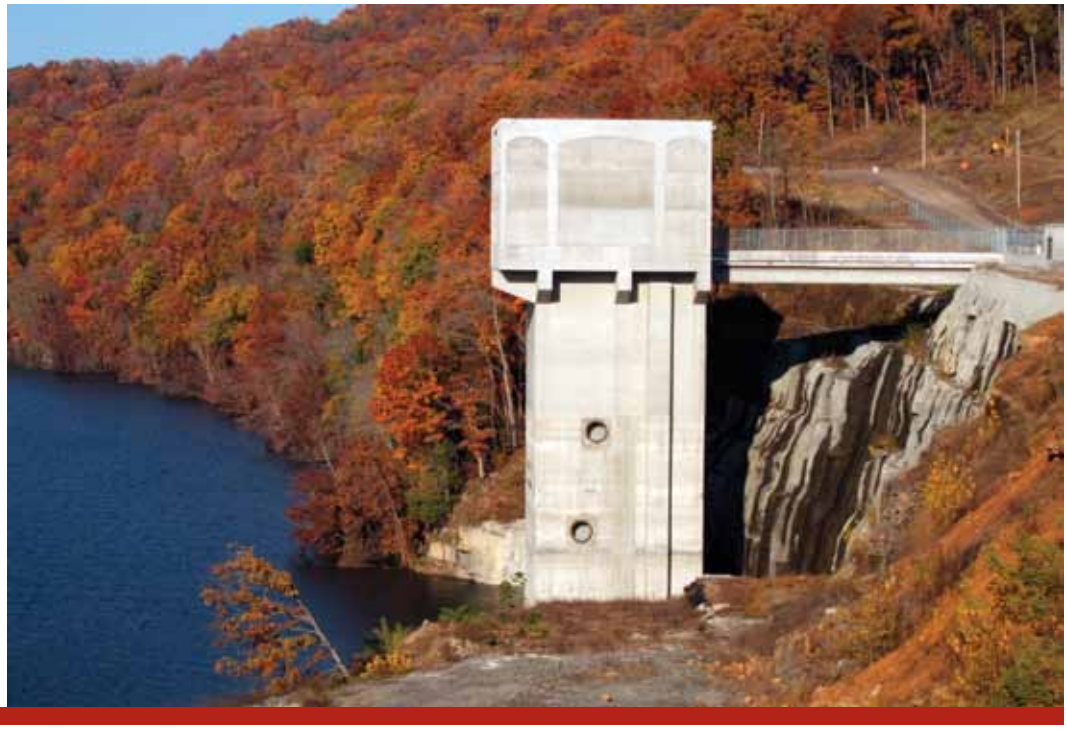


Crack and joint sealing

stops water leaks in cracks, joints and pipe seals | Azo-Grout™ 424

The general contractor at the Brilliant Dam expansion project relied upon technical supervision from Multiurethanes to train his workforce in the appropriate methods for successfully injecting Azo-Grout™ 424 into large, gravity concrete, hydro-dam structures. The Azo-Grout formulation was used extensively to seal leaking cracks and construction joints.

Project:	**Brilliant Dam repair**
Location:	**Castlegar, British Columbia**
General contractor:	**Hatch Energy**
Distributor:	**Multiurethanes Ltd.**
Product used:	**Azo-Grout™ 424**



Crack and joint sealing

stops water leaks in cracks, joints and pipe seals | Azo-Grout™ 424

The intake tower in a new dam at Lake Fort Smith State Park was designed with double waterstops and walls more than five feet thick. Yet, trouble arose as the reservoir was filling when water bypassed the waterstops through various shrinkage cracks. At a depth of more than 30 feet below the reservoir water level, the general contractor overcame the problem by using special injection equipment and deep-drilling techniques to pre-flush the shrinkage cracks and inject the powerful water cut-off system—Azo-Grout™ 424.

Project:	**Lake Fort Smith intake tower**
Location:	**Mountainburg, Arkansas**
General contractors:	**Granite Construction, Inc.**
Engineering firm:	**Burns & McDonnell**
Distributor:	**Multiurethanes Inc.**
Product used:	**Azo-Grout™ 424**

Excavation soil stabilization

prevents erosion and stabilizes soil | Azo-Grout™ 443

Facility managers at an Eaton manufacturing plant sought to construct new equipment foundations in close proximity to existing operating machinery. The construction would require deep excavation below the water table and through unconsolidated sand and gravel. To stabilize the soil perimeter prior to excavation, the general contractor chose to systematically inject Azo-Grout™ 443 through vertical sleeve pipes that were strategically placed around the planned excavation site.

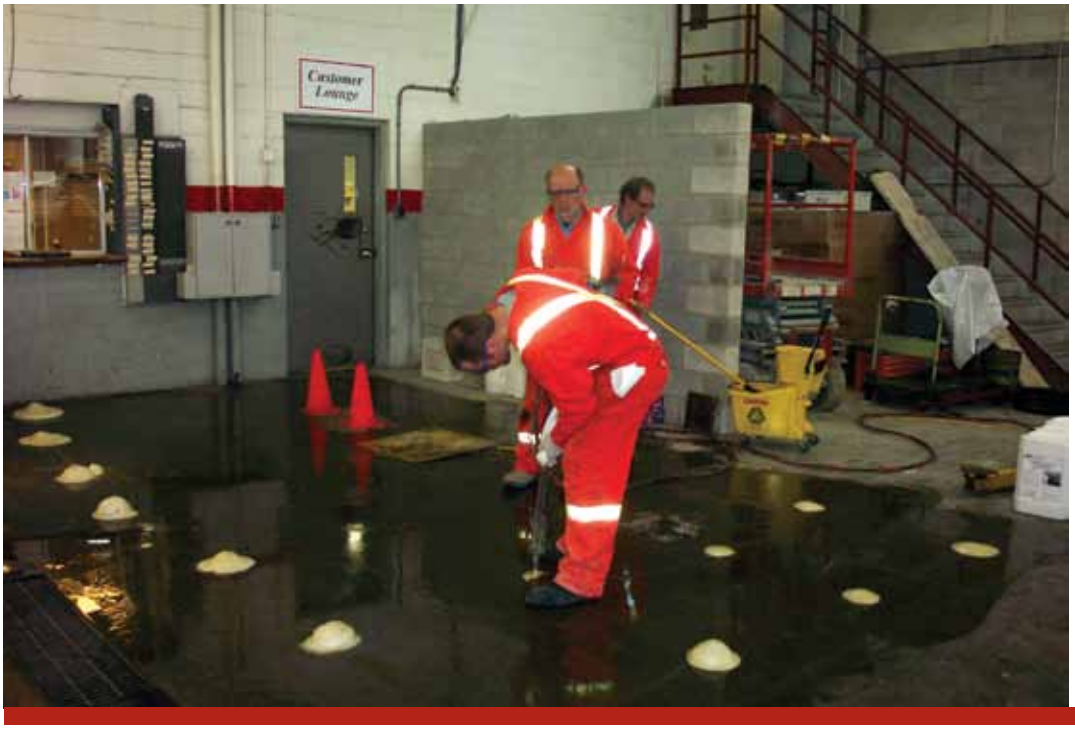
Project:	**Soil stabilization**
Location:	**Galesburg, Michigan**
General contractor:	**Hazelhoff Builders Inc.**
Distributor:	**Multiurethanes Inc.**
Product used:	**Azo-Grout™ 443**

Sealing caisson wall leaks

stops water seepage into deep foundation excavations | Azo-Grout™ 443

Deep excavation contractors frequently encounter sub-surface water and soil inflow conditions when dealing with caisson walls and cable tieback anchors. On a major condominium construction site, the excavation contractor used Azo-Grout™ 443 to plug wall defects and prevent groundwater and quicksand from entering the excavation area.

Project:	**Caisson walls**
Location:	**Oakville, Ontario**
General contractor:	**Rumble Foundation**
Distributor:	**Multiurethanes Ltd.**
Product used:	**Azo-Grout™ 443**



Underground void filling

slab lifting of floors, roadways and sidewalks | Azo-Grout™ 551

A busy car dealership was undergoing renovation and expansion when voids were discovered beneath the concrete floor in their service bays. Azo-Grout™ 551 was injected through strategically drilled holes to fill the voids and provide support to the concrete floor slabs.

Project:	**Void filling**
Location:	**Mississauga, Ontario**
Distributor:	**Multiurethanes Ltd.**
Product used:	**Azo-Grout™ 551**

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Driven by a culture of creative thinking, it was the dedicated research and development staff at Azon who used their experience in thermal barrier polymer chemistry to develop a diverse portfolio of products for construction, manufacturing, food grade handling, agriculture and recreation.

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