

Azon
643 W. Crosstown Parkway
Phone: (800) 788-5942
Phone: (269) 385-5942
Fax: (269) 373-9295
www.azonintl.com
www.azogROUT.com

MAINTENANCE OF CONCRETE

Short specification

Azo-Grout™ 675 hydrophilic polyurethane injection material is used to stop water infiltration in concrete structures, including municipal and utility facilities, pedestrian and automotive tunnels, and concrete dams and powerhouse galleys. The material is ideal for below-grade applications where it is advantageous to use the grout as a seal membrane wrap on the outside surface of a structure. Material will cure to a flexible rubber-like consistency once reacted per the processing guidelines outlined by Azon, Kalamazoo, Michigan.

Full specification

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes: The material and equipment needed to stop water infiltration in manholes, sewers, tunnels and dams where water or moisture is present at all times.
- B. Related Requirements:
 - 1. Section 03 01 30 – Maintenance of Cast-in-Place Concrete
 - 2. Section 03 01 30.61 – Resurfacing of Cast-in-Place Concrete
 - 3. Section 03 01 40 – Maintenance of Precast Concrete
 - 4. Section 03 01 40.61 – Resurfacing of Precast Concrete
 - 5. Section 03 64 60 – Chemical Grouting

1.02 SUBMITTALS

- A. General: Submit listed submittals in accordance with Conditions of the Contract and Division 1 Submittal Procedures Section.
- B. Product Data:
 - 1. Submit manufacturer's product information brochures.
 - 2. Submit MSDS of each relevant product used on the job site.
 - 3. Submit manufacturer's product data sheets per grout product used.
 - 4. Submit product technical bulletins for intended applications—a general outline of instructions for applying and installing manufacturer's grout.

1.03 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Contractor should demonstrate adequate experience applying polyurethane hydrophilic chemical grout.
- B. Regulatory Requirements and Approvals:
 - 1. Grout and components must be ANSI/NSF 61 certified if product could come in contact with potable water during the application process.
 - 2. All material components must be fabricated in the United States.

***Depending on the scope of the project, it may be advisable to consult a manufacturer's representative during installation.

1.04 DELIVERY, STORAGE & HANDLING

- A. General: Comply with Division 1 Product Requirement Section.
- B. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.
- C. Storage and Protection:
 - 1. Refer to the manufacturer's product data sheet and material safety data sheets (MSDS) for storage and handling instructions.
- D. Site Precautions:
 - 1. OSHA guidelines and local restrictions, as applicable, must be followed at all times.
 - 2. Information, instructions and warnings on all MSDS, labels and product data sheets must be adhered to.
 - 3. This material is intended to be used by trained individuals with the proper equipment.
 - 4. Environmental waste—liquid, solid or vapor—must be contained within the job site and disposed of in accordance with state, province and local regulations. See the manufacturer's literature for removal information.

PART 2 PRODUCTS

2.01 GROUT

- A. Manufacturer: Azon
Contact: 643 W. Crosstown Parkway, Kalamazoo, Michigan 49008-1910; Tel: (800) 788-5942; (269) 385-5942; Fax: (269) 373-9295
- B. Web site: www.azogROUT.com
- C. Specifier Note: Select a grout product from below.
 - 1. Azo-Grout™ 675 [viscosity at 77°F (25°C): 800-900 centipoise]
 - a. Material: Hydrophilic polyurethane injection material that is used to stop water infiltration in concrete structures, including municipal and utility facilities, pedestrian and automotive tunnels and concrete dams and powerhouse galleys. The material is ideal for below-grade applications where it is advantageous to use the grout as a seal membrane wrap on the outside surface of a structure.
 - b. The grout is a solvent-free, methyldiphenyl isocyanate (MDI)-based prepolymer that has been approved for contact with potable water in accordance with National Sanitation Federation (NSF) standard 61.
- D. Accessories:
 - 1. Azo-Purge MP2™ safety flush agent is recommended for purge cleaning of the grout injection pumps.
- E. Equipment:
 - 1. 2 - Titan 440 airless injection pumps (1,500 psi). Use one injection pump for adding water (if necessary), and a separate injection pump for the actual grout injection.
 - 2. Hammer drill 3/8" chuck, 10" bit or longer as needed per job application.
 - 3. Injection packers 3/8" diameter, zerk fitting.
 - 4. Socket drive.

2.02 PRODUCT SUBSTITUTIONS

- A. Substitutions: Contractor must submit a product data sheet of an equivalent product to ensure similar viscosity levels for a suitable substitution.

2.03 INJECTION

- A. Field Application: Inject product in compliance with grout manufacturer's recommendations. See the technical bulletin, product data sheet and brochure for more details.

2.04 SOURCE QUALITY CONTROL

- A. Tests, Inspection: Ensure manufacturer is in compliance with ISO registration procedures for the production of the specified grout.

PART 3 EXECUTION

3.01 MANUFACTURER'S INSTRUCTIONS

- A. Compliance: Comply with the instructions and recommendations of the grout manufacturer. Refer to the technical bulletin and the product data sheet for further instruction.

3.02 EXAMINATION AND PREPARATION

A. Site Verification of Conditions:

1. Verify that site conditions are acceptable for product installation in accordance with installer's recommendation.
2. Using the gel encapsulation method, drill holes completely through the structure to allow injection to take place from the inside.
3. The pattern and spacing of holes may vary depending on each repair project.
4. Securely install the injection packers in the pre-drilled holes.
5. Do not proceed with grout installation until acceptable conditions are met.
6. See technical bulletin for more details.

3.03 APPLICATION AND INSTALLATION

- A. Azo-Grout™ 675 can be injected as a single component when sufficient water is present. If the crack is dry, inject water first through each packer using a separate injection pump. The use of a second injection pump for injecting water reduces the risk of having a reaction that would result in a clogged pump.
- B. Begin injection at a corner and continue injection in one packer until Azo-Grout™ 675 penetrates the surrounding drill holes (open packers).
- C. The temperature of the materials when mixed and the temperature of the soil into which the material is introduced can also affect the speed of the reaction.
- D. Azo-Grout™ 675 must be sufficiently applied to allow a satisfactory ratio to be obtained for maximum effectiveness. Visual inspection of the injection material penetrating the surrounding drill holes will determine the consistency of the reacted material.
- E. Refer to the manufacturer's technical bulletin, product data sheet, MSDS guidelines and product information brochure for more information about the injection procedure.

3.04 CLEANING

- A. Once the material cures, the ends of the packers can then be cut or knocked off.
- B. Excess grout material can be scraped off using a putty knife or wood shim. This material can be disposed of in normal trash containers.
- C. Flush the injection pumps and all mechanical components of all residual grout when injection is finished with recommended Azo-Purge MP2™ safety flush agent (see *Accessories*).
- D. Dispose of waste materials in accordance with state, province and local regulations. Building and safety codes governing the use and disposal of material vary widely.
- E. Refer to the manufacturer's technical bulletin, product data sheet, MSDS guidelines and product information brochure for more information about the cleaning procedure.

END OF SECTION