TURBO-SEAL U™

Single Component Waterproofing Injection Material

PRODUCT DATA: Injection Waterproofing **2-201.45**

Description

Turbo-Seal U is a single component, highly elastomeric polymer rubber infused with special adhesives. **Turbo-Seal U** is used to repair water leaks in below grade structures. Due to its superior flexibility, adhesiveness and self sealing characteristics, **Turbo-Seal U** is ideally suited for repairing and restoring damaged waterproofing membrane systems. **Turbo-Seal U** is applied by rotor/stator injection pump.

Uses

Turbo-Seal U is applied in any below grade structure. **Turbo-Seal U** can be applied to areas experiencing high volume active water leakage or minimal water leakage. Preventative sealing is also applicable. Suitable applications include the following types of underground structures:

Tunnels
Underground Garages
Water Tanks
Septic Tanks
Concrete Reinforced Levies
Subway tunnels

Areas of application include:

Shrinkage Cracks
Moving Joints
Pipe Penetrations
Settlement Cracks
Construction Joints
Joints in Precast Concrete Segments
Expansion Joints

Turbo-Seal U is injected into leaking areas after drilling to the damaged waterproofing layer restoring its integrity.

Features	Benefits
Adhesive in wet conditions, active water leaks, and on surfaces with foreign materials	Ease of application and effectiveness.
Partial bentonite composition	Seeks out leaks and stops them.
Remains as a flexible gel. Durable to vibration and continuous movement.	Waterproofing is maintained. No loss of adhesion or separation.
One component. No mixing of chemicals, easy to apply, safe, easily stored and transported.	Cost-effective, reduce labor, save time, fewer mistakes in application.
High solids content, solvent free, made from recycled materials.	Non-toxic, non-flamable. Safe application.
Durable. Chemically resistant, resistant to freeze/thaw cycling, dry/wet cycling.	Effective in many different types of environments.

Packaging

Turbo-Seal U is packaged in 20L (5.3 gallon) buckets.

Yield

2.25 ft^2/gallon at 7/10" wet thickness
4.00 ft^2/gallon at 2/5" wet thickness

Coverage may vary with the application technique used. Actual coverage and thickness used depends on the size of the void behind the structure and the porosity of the structure.

Transportation

Turbo-Seal U is classified as a DOT non-hazardous material.

Shelf Life

Indefinite, when stored according to recommended storage guidelines.

Storage

Store in unopened containers in clean, dry conditions at 40 to 80° F.

Technical Data Composition

Turbo-Seal U is a polymer rubber infused with special adhesives.

Testing

ASTM D1353-03
ASTM D2202-00
ASTM D5329-04
ASTM D56-05
ASTM D36-00
ASTM D2196-99
CGSB 37.5-M89

Typical Properties

PROPERTY	VALUE
pH	7.5 ~ 8.0
Specific Gravity	1.1 ~ 1.3
Freezing Point	Below -25°
Softening	Below 30°
Physical State	Liquid
Appearance	Black
Viscosity	3,600,000 Cps
Flash Point	> 200° F

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Test Data

Turbo-Seal U

PROPERTY	RESULTS	TEST METHOD
Solids Content	75%	ASTM D1353
Flow	113 ± 4mm	ASTM D2202
Penetration, in mm	28 ± 0.8mm	ASTM D5329 sec. 6
Flash Point	No observable flash point	ASTM D56
Toughness	1.64 ± 0.15 lbs	CGSB 37.50 – M89
Elongation	14.93 ± 1.82 inches	CGSB 37.50 – M89
Energy to Break	11.70 ± 1.08 in-lbs	CGSB 37.50 – M89
Adhesion	Rating of 1 (Excellent)	CGSB 37.50 – M89
Softening	Below 30°C	ASTM D36
Viscosity	3,600,000 CPS @ 72° F	ASTM D2196
Water Absorption	Gain 7 ± 3.2 gr.	CGSB 37.50 – M89
Low Temperature Flexibility	No cracks	CGSB 37.50 – M89
pH	7.71	

Results shown are not intended as performance criteria for on-site installed material.

How to Apply Turbo-Seal U

Equipment

Turbo-Seal U should be applied with a rotor stator pump.

For most applications, use an injection pipe with an outer diameter of 5/8".

A hammer drill will be sufficient for most applications.

Preparation

Check the thickness of the concrete. Drill 5/8" diameter holes to the waterproofing layer at 3.25' intervals.

Install the injection packers. For most applications, an injection pipe with an outer diameter of 5/8" and a packer are used to make an injection opening and inspection holes at 3.25' intervals.

Injection

Inject **Turbo-Seal U** slowly at low pressure and continue injecting until counter flow from other drilled holes is seen. Remove the injection pipe from the drilled hole that **Turbo-Seal U** has counter flowed through. Fill the hole with non-woven cloth and polymer mortar. If multiple locations have been drilled, repeat process as necessary.

Some applications may require an initial application of polyurethane or other material to fill excessive voids.

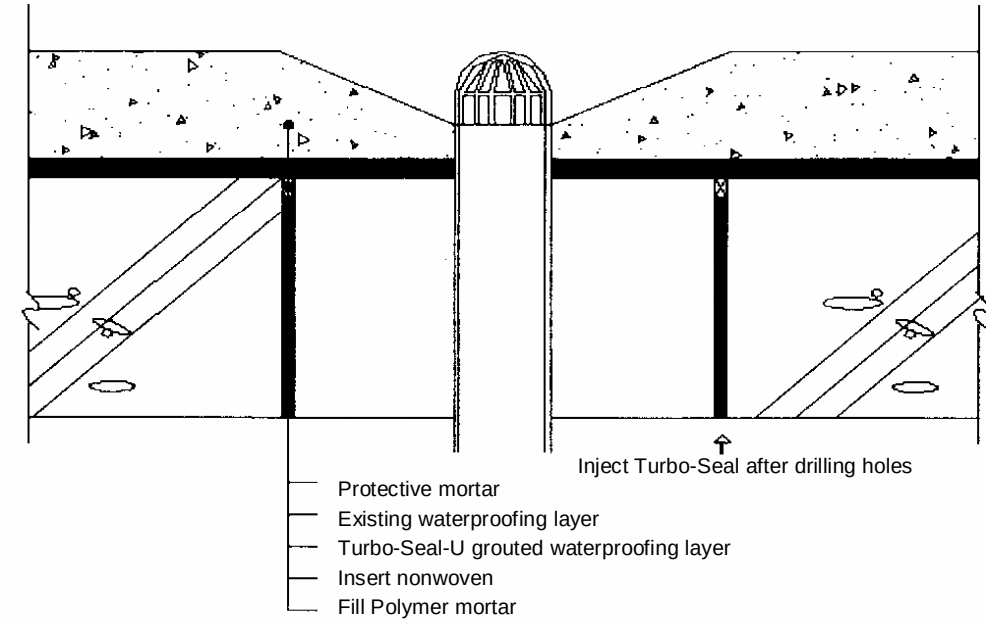
Clean Up

Dab excess **Turbo-Seal U** off of the pump with a cloth. Additional cleaning can be done with a citrus based cleaner.

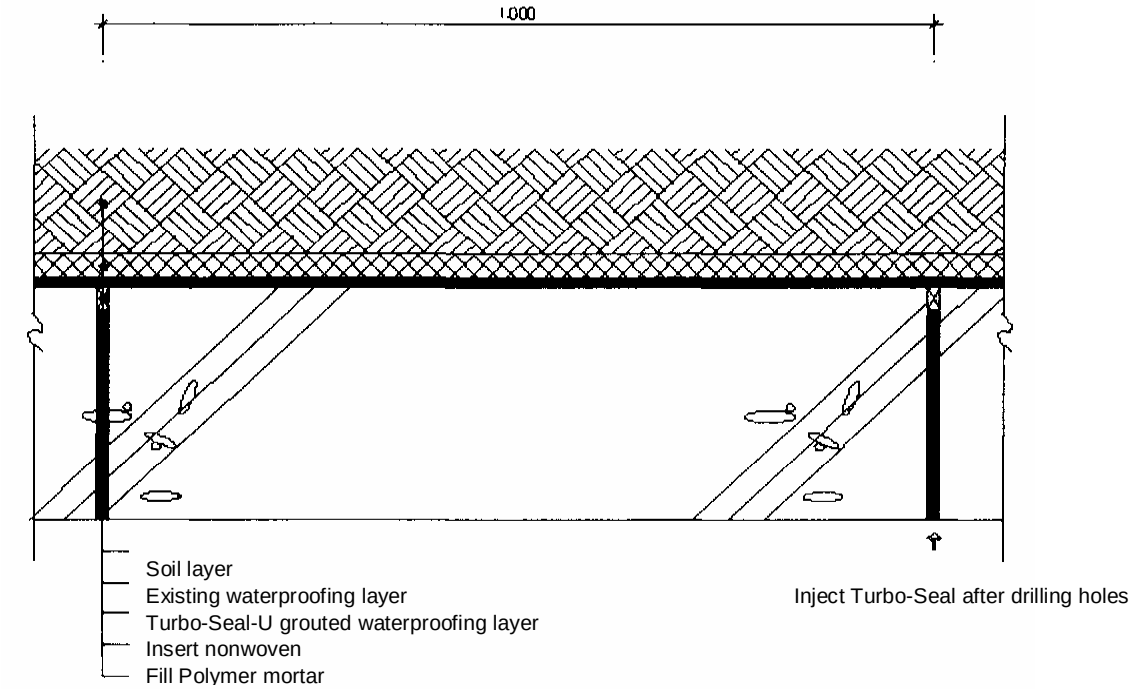
Health and Safety

Avoid contact with skin and eyes. Wear suitable gloves and safety glasses. See MSDS.

Turbo-Seal U Details

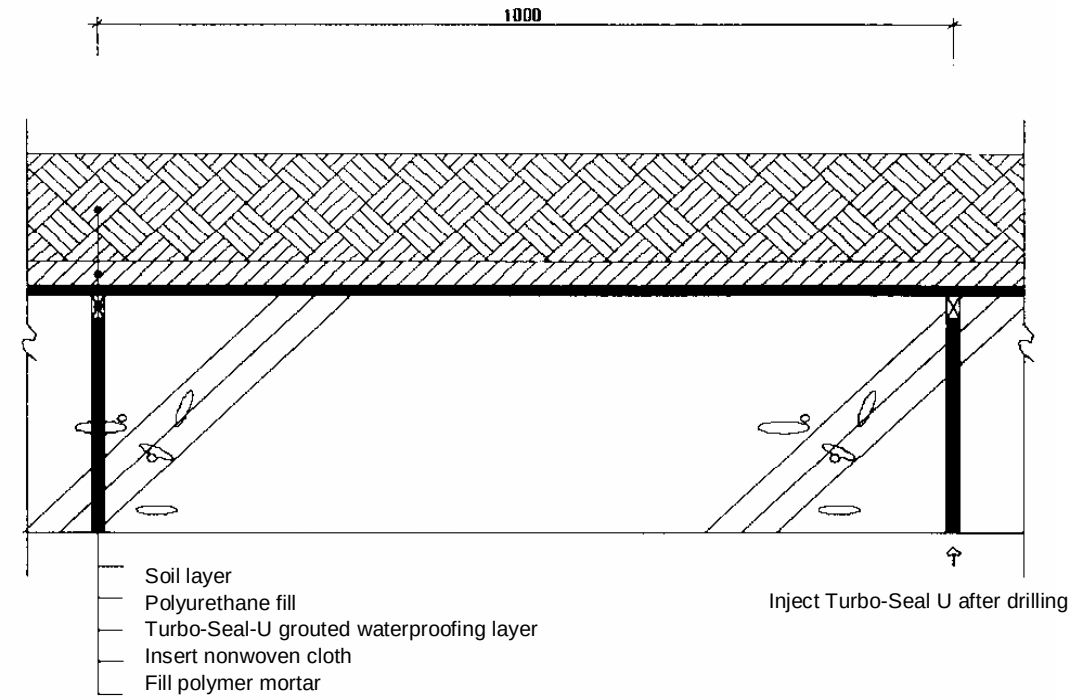


Drain Detail

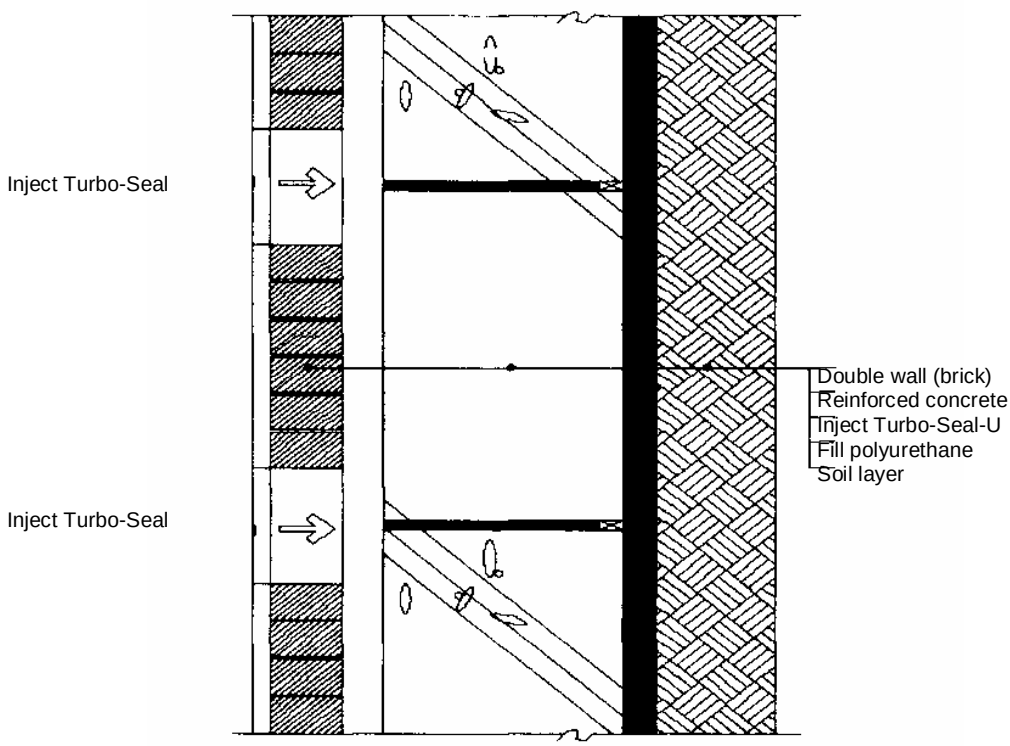


Exterior Wall Existing Waterproofing Layer Present

Turbo–Seal U Details Continued



Exterior Wall No Existing Waterproofing Layer Detail



Double Wall Detail

Turbo–Seal U Details Continued

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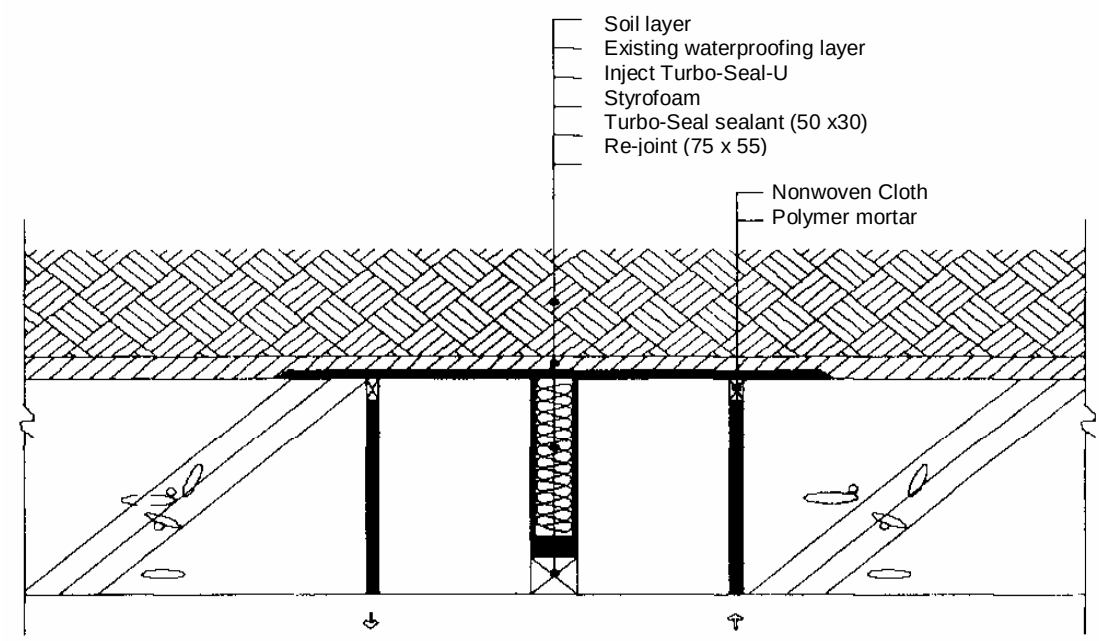
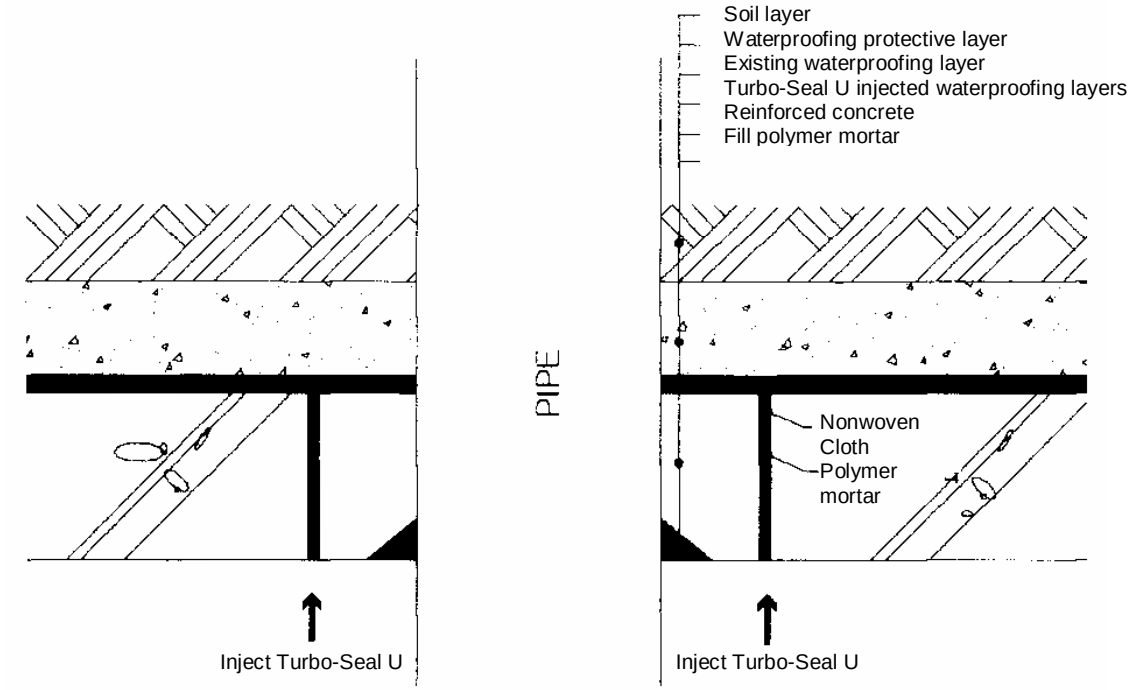


Expansion Joint Detail



Pipe Penetration Detail

For Technical Assistance call toll free at 866-99RESYS

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