



# STOPWATER 300<sup>®</sup>

## High Strength Polyurethane

Concrete Repair Reinforcement · Leakage Crack Waterstops  
2 Component Type Polyurethane Waterstops for Filling

### ■Product Information

STOPWATER 300 is self-reacting type Hydrophobic Type 2 Component Polyurethane Resin which is invented by using polyether polyol. It is applied to waterstop leakage section and it is high strength reinforcement material that reinforces dry crack caused by defect of concrete structure and buildings. Foam rate that reacts with water is minimized. This is restrained non discharge & low-discharge waterstop material that hardened foam is harder than normal polyurethane foam and also density is high. Therefore, it does not have defects caused by deformation and it waterstop effects last semi-permanently. It provides strong physical strength after hardened. Furthermore, low viscosity and strong penetration ability brings excellent adhesive power even on the wet surface. It is non-elastic polyurethane reinforcement material.



### ■Characteristics

- Since it has low viscosity, it penetrates into minute crack. It provides complete waterstop result.
- It shows much more excellent strength than mechanical strength of normal concrete structure. Compressive Strength (57N/mm<sup>2</sup>), Adhesive Strength(8N/mm<sup>2</sup>) and Seal Strength (37N/mm<sup>2</sup>).
- Hardened foam has excellent adhesiveness on both wet and dry surface of concrete main body. Therefore it won't get exfoliated and maintains excellent waterstop ability for long period of time.
- When main component and hardening component is mixed you have enough pot life (about 30~100min), therefore you can inject it by using 1 component type pump. And you can control the hardening time freely by adding catalyst.

### ■Usage

- Repair and reinforce wet and dry crack of all concrete structures
- Cutoff and reinforcement of ground and bedrock
- Crevice filling, waterstop and reinforcement



### ■Application Area

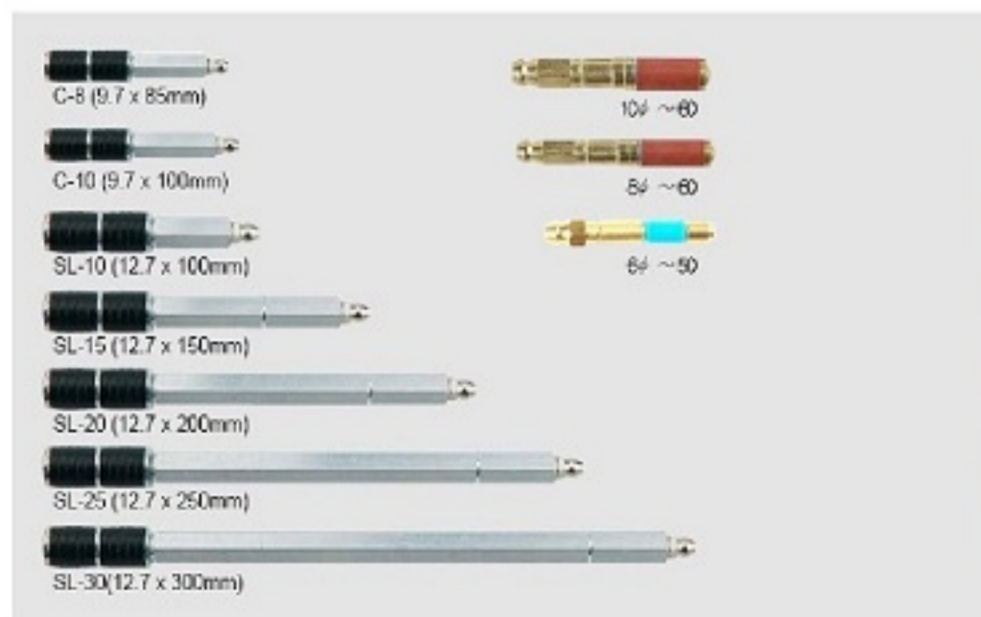
Normally it can be used to waterstop all types of concrete structures and buildings when there is a leak. Especially it can reinforce and waterstops cracks and joint section of concrete constructions. It can be applied on following places.

- Waterstops leaking section of basement parking lot and underground concrete structure.
- Waterstops leakage of concrete joint section.
- Waterstops leakage section where humidity and dryness is mixed up together.

### ■Technical data / property

Exterior Appearance : No Color (R) / Dark Brown Liquid (H)  
Mixing Rate : 100(R) : 100(H) 2 Component type  
Viscosity at 25°C (KS F 4923) : 100~150(R) / 150~200(H) mPa.s  
Mixing Density at 25°C : 1.12±0.05  
Pot Life at 23°C : 40 Min  
Compression Strength (KS F 4923) : 57 N/mm<sup>2</sup>  
Seal Strength (KS F 4923) : 35 N/mm<sup>2</sup>  
Seal Breaking Expansion Rate (KS F 4923) : 3%  
Adhesive Strength (KS F 4923) : 8 N/mm<sup>2</sup>  
Solids : 90~91%  
Flash point : >155°C  
Packing : 20kg(R) : 20kg(H)  
Foaming Percentage(at 25°C) : 100~200%

### ■Using Materials



1)High pressure injection packer.



2)Injection equipment for polyurethane resin injection.

- 1)It is specially designed to endure high pressure that is applied. Injected resin won't flow backward and this packer is also specially designed not to leak resin around stabilized and fixed packer.
- 2)This is 1component type high-pressure injection equipment that is specially manufactured to fill on a leakage and fracture spot by using polyurethane foam and epoxy injection material.



## ■ Using Materials

### -PREFORATION

Perforate around leaking and fracturing spot and fixate packer. Normally when injecting polyurethane foam, it is injected through packer generally. During the perforation use hammer drill and make holes with same diameter. External diameter of Drill Bit should be 10mm. Perforation angle between concrete surface and crack should keep 45 degree angle or under. If it is possible, then make position of perforation hole that contacts crack as thick as 1/2~2/3 of concrete thickness. If the concrete thickness is less than 10cm then directly perforate to fractured spot. If the thickness is 10cm~50cm, perforate in the distance of 1/5 thickness of the concrete. Conduct it around fractured spot with 20cm interval and perforate in zigzag.

### -Packer Installation

Select the suitable packer out of various kinds of packers that suits the most according to field circumstance. And use T-box and firmly tighten up the packer to perforated hole and make sure not to bounce off by counter pressure. (It might get damaged if it is tightened too hard.)

### -Polyurethane Injection

Inject STOPWATER 300 (High Strength Polyurethane) Type by using high-pressure injection equipment or grease gun. Maintain initial injection pressure about 15kg/cm<sup>2</sup> and keep injecting until waterstop material flows out through fractured spot. Halt injecting for a few minutes when STOPWATER 300 (High Strength Polyurethane) Type flows out grossly between cracks during first PACKER injection, then injected foam will foam completely and it will become as seal material. For next injection operation, STOP WATER 300 (High Strength polyuret-hane) Type will fill up the cracks well enough. After 5 minutes, start to re-inject. You can ignore the chemicals that leaks out little bit, even you can check injection status. If the crack is very big then conduct sealing before injection. If the waterstop is injected properly, make sure to check the following steps in orders.

- Does the water inside of the crack come out caused by Polyurethane Foam Waterstop injection!
- Does the injected Foam react with water and come out from the cracks after gradually foaming!
- Finally, does the undiluted liquid of Polyurethane Foam slides out between the cracks before it starts foaming!

If it is so then the injection is properly done.

### -Removing Packer

Use vice pliers as a tool or bend off or use hammer to remove it.  
If there is wet spot left then inject Polyurethane Foam again.

### -Finishing Operation

Remove , STOPWATER 300 (High Strength Polyurethane) Type that is smeared around cracked area.  
Spread with flexible sealing material (DH-CF30 Crack Cover Material)



### ■Cleaning

All the equipments and tools that are used for this operation should be cleaned when the operation is finished. Detergent such as M.E.K, Acetone, Xylene, Toluene and urethane thinner should be used when cleaning. If the Foam is smeared on your skin during the performance, wash it immediately with flowing water. Used injection equipment should need to be stored after filling up the hose, pump and medical fluid container with Engine Oil and Oil Pressure Oil.

### ■Cautions

- When you treating medical fluid, make sure you wear protective helmet, goggle clothes and other protective devices.
- If the medical fluid is smeared on your skin, wash it off immediately and clean up with soapy water.
- All the hand tools and equipments that are used for this operation should be cleaned with thinner thoroughly.
- If you are working in sealed room, then make sure to conduct constraint ventilation for clean air.
- If the medical fluid is smeared on your skin and causes skin trouble, then you should go see specialist for prescription.
- If the temperature is below 5°C, then you must artificially raise up the temperature of medical fluid. This way you can get proper Pot Life.
- If the atmosphere temperature is high and the area is humid, Pot Life of medical fluid quickens. On the contrary, Pot Life will slow down in low temperature area.
- Be aware of it before you conduct the operation.

### ■Storage

Recommended temperature for storage is 5~30°C with no moisture. Store it in cool area. Storing period is about 8 months in sealed condition however it can be corrupted according to storing area and conditions. Preferably use it as soon as possible.

### ■Health & safety

STOPWATER 300 should only be used as directed. We always recommend that the Health & Safety data sheet is carefully read prior to application of the material. Our recommendations for protective equipment should be strictly adhered to for your personal. The Health & Safety data sheet is available upon request from your local agent.