

CWC®SMART POLYGROUT HP

Aqua reactive PU Based Expanding Grouting Compound

Description

CWC®SMART POLYGROUT HP is a low viscous one component hydrophobic polyurethane injectable chemical grout which immediately reacts with water and forms stable, hard yet flexible solid expansive foam to fill cavities and cracks. When injected under pressure into leaking structures and through the process of polymerization, a permanent water barrier is formed.

Indicative Characteristics

Physical appearance	Dark Brown Liquid
Specific Gravity @ 30°C	1.10 ± 0.02
Gel Time (Seconds)	100 - 120
Expansion%	2000 - 2500
Closed cell	>90%
Water absorption	<5%
Foam Factor	~20

Domains of Application

- **CWC®SMART POLYGROUT HP** has versatile uses and it is normally considered to be the last resort, when all conventional grouting methods to stop leakages have failed.
- **CWC®SMART POLYGROUT HP** has successfully performed under certain most challenging conditions, where satisfied users have referred it as a magic product, to achieve almost impossible solutions.

Building Construction

- To stop water leakage into underground structures (basements, tanks, sumps, pits etc.).
- Soil stabilization for foundations.
- Serving as sealer or liner in concrete structures.
- To prevent water ingress, oozing from ground.
- To serve as a water barrier in basements, gravel bedding as damp proof course.

Civil Engineering Works

- Solidifying and strengthening ground and rock and stop water from oozing out.
- Preventing leakage in tunnels and tunnel segments, deep underground structures and water retaining structures.
- Stabilization of abutment and bridge piers.
- Preventing leakage through dams.
- Prevention of landslides.
- Solidifying and creating a water barrier in rock and earth fill dams.
- Backfilling by impregnation for tunnel shield construction.
- Preventing air from leaking during compressed air shield construction or caisson construction.
- Increasing bearing capacity of underpinning.

Environmental Engineering & Other Applications

- Solidifying agent in Atomic, Industrial and Chemical waste solutions or waste water units.
- Solidifying agent for Sewage and sludge's removed from organic and inorganic waste dumps.
- Preservation of historical relics, harbor engineering, mining, reclamation work, heavy engineering works, etc.

Application

APPLICATION INSTRUCTIONS

SUBSTRATE PREPARATION

- Surfaces of cracks, joints and voids need to be clean, free of loose and friable particles, with no dust, oil, grease or any other bond-breaking substances
- Any dirt must be blown out with compressed air
 - Pre-wet access areas to make cleaning easier

In case of application by injection method, **CWC®SMART POLYGROUT HP** should be pumped by a positive displacement plunger type pump. Inject at slow and even pressure through the injecting nipples till refusal or when the grout oozes out from the nipple immediately adjacent to or above the one being injected.

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APPLICATION METHOD / TOOLS

CWC®SMART POLYGROUT HP can be used with normal single component injection pumps.

Empty the **CWC®SMART POLYGROUT HP** into the hopper of the single component pump and start the injection process.

A secondary injection process must be carried out within the gel time (approximately 30 minutes) of the first injection. The secondary injection can usually be carried out through the same packer. A new packer might have to be installed if the secondary injection is done more than 30 minutes after the first one.

CLEANING OF EQUIPMENT

Clean all tools and application equipment as soon as possible.

Alternatively Cleaner like MEK or any standard solvent before polymerization starts and also can be used to remove any polyurethane residue immediately after use.

Advantages

- **CWC®SMART POLYGROUT HP** has a very remarkable solidifying properties even in ground where water flow is violent. It stops water from oozing and solidifies the ground with high strength.
- **CWC®SMART POLYGROUT HP** exerts successful solidifying property in all types of water, such as sea water, mineral water and those containing acid and alkali.
- **CWC®SMART POLYGROUT HP** is extremely stable both chemically and physically and will not be damaged by any Bacterium.

- **CWC®SMART POLYGROUT HP** possesses excellent adhesiveness to soil particles and it is therefore also useful in landslide prevention.)
- **CWC®SMART POLYGROUT HP** is completely non-pollutant to the water it contacts and has no effect on potable water, fish or marine life.
- Minimum shrinkage ensure complete water barrier.
- Excellent performance periodic wet and dry condition.
- **CWC®SMART POLYGROUT HP** possesses excellent adhesiveness to wet as well as dry concrete.
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Shelf Life & Storage

12 months from the date of manufacturing when stored in un-opened, original sealed and dry condition at a temperature range from +5°C to 40°C

Packing

20 kg Drum / Bucket

Precautions

- Store the material at the 5° to 35°C temperature range in shaded cool place and keep it away from fire and any heated body.
- Do not keep left over material in open condition.

Safety

- Wear hand gloves, safety shoes and safety goggles while using and handling the product.
- In case eyes or mouth are affected wash with plenty of clean water and seek medical treatment immediately.

Before use, refer to the Material Safety Data Sheet.
The MSDS is available on www.cwcchemicals.com