



# POLYGROUT

## Expansive Aqua-Reactive Water Barrier And Grouting System

### DESCRIPTION

“POLYGROUT” is a low viscosity liquid which react with water in a controlled manner to form a swelling resilient adhesive solid in densities and strength appropriate to the designated task. When impregnated under pressure into leaking structures and through the process of polymerization, a permanent flexible/rigid water barrier is formed.

The liquid retains its initial low viscosity upon contacting water allowing to flow without dilution. Once the “POLYGROUT” water reaction commences, the grout expands penetrating into its surrounding and quickly cures to a tough, adhesive solid to repel the influence of underground seepage flow and solidify the objective ground which is unaffected by corrosive environments.

### FEATURES

“POLYGROUT” has a very remarkable solidifying property even in ground where water flow is violent. It stops water from oozing and solidifies the ground with high strength.

“POLYGROUT” exerts successful solidifying property in all types of water such as sea water, mineral water and that containing slight acid and alkali.

“POLYGROUT” is extremely stable both chemically and physically and will not be damaged by any bacterium.

“POLYGROUT” is completely non-pollutant to the water it contacts and has no effect on portable water, fish or marine life.

“POLYGROUT” possesses excellent adhesiveness to spoil particles and is therefore useful in landslide prevention.

“POLYGROUT” does not away or is not diluted by the ground water.

### BUILDING CONSTRUCTION USAGES

Prevention of water from leaking into underground structures (basements, tanks, sumps, pits etc.)

Soil stabilisation for foundation.

Securing tie - back anchors for retaining walls or guys.

Serving as sealer or liner in concrete structures.

Preventing water from oozing from ground.

Serving as water barrier in basement gravel bleeding waterproofing system.

### CIVIL ENGINEERING WORK APPLICATION

Solidifying and strengthening of ground and rock and stopping water from oozing out.

Preventing leakage in tunnels and tunnel segment, deep underground structures and water retaining structures.

Stabilisation of abutment and bridge piers.

Preventing leakage through dams.

Preventing of landslides.

Solidifying and creating a water barrier in rock and earth fill dams.

Back filling by impregnation for tunnels shield construction.

Preventing air from leaking during compresses air shield construction or caisson construction.

Facilitating supportability of pile and pier.

Increasing bearing capacity of underpinning.

Prevention of crown collapse in tunnels.

### ENVIRONMENTAL ENGINEERING AND OTHER APPLICATIONS

Solidifying agent to atomic, industrial and chemical waste solution or waste water.

Solidifying for sewage and sludges removed from organic and inorganic waste dumps.

Preservation of historical relics, harbour engineering, mining reclamation engineering etc.

## IMPREGNATION METHOD

'POLYGROUT' is generally pumped as a single component through low pressure hand operated pumps or special high pressure pumps as required.

Hoses are filled with packers/injection nipples with valve which is sealed against back pressure with quick setting cement. The structure is sealed/patched properly to prevent from coming out.

'POLYGROUT' reacts with water and expands to form a "fluid wedge" and blocks the leakage. Even gushing leakages can be sealed without it being necessary to block the hydraulic pressure. Due to the low viscosity and expansion during reaction even the smallest cracks, fissures and pores can be impregnated.

Since the chemical reaction is very quick the results are immediately visible

When water is not naturally present in sufficient quantity, to assure the desired reaction, a sufficient quantity of water is also required to be injected.

## PROPERTIES OF POLYGROUT

PROPERTIES	
Appearance	Light-yellowish transparent liquid
Viscosity, (cps at 25°C)	200
Specific Gravity (at 20°C)	1.06 ± 0.02
Corrosiveness	Non-corrosive
Toxicity	Non-toxic
Flammability	Non-inflammable
Gelation	Highly strong elastic gel

**STORAGE** : Store in dry area. If stored properly in unopened containers, a shelf life of approximately 12 months could be expected.

**PACKING** : POLYGROUT is available in 20 kg drums

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### TECHNICAL SERVICE :

*SWC group maintains a technical division with highly qualified technical personnel to investigate and advise on subjects related to Concrete and the Construction Industry. The Division can advise on the correct use and selection of right products at the right place.*

*SWC undertakes Consultancy Service for diagnosis and rehabilitation of distressed structures. SWC undertakes Contracts on turnkey basis for total Waterproofing System with guarantee*

**NOTE** : This Technical data sheet is to be used as guidance only. Although the basic formulation of the product remains unchanged, production refinements arising from continuing research and evaluation programmes may occasionally result in marginal change in properties. The recommendation and properties of the product based on continuous monitoring of the product are not intended to infringe on other patents.

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