

CICO POLYGROUT

LOW VISCOSITY HYDROPHILIC POLYURETHANE INJECTION RESIN BASED GROUTING SYSTEM

CICO POLYGROUT is a low viscosity hydrophilic polyurethane injection resin which reacts with water in a controlled manner to form a swelling, resilient adhesive solid in densities and strength appropriate to the designated task. When injected under pressure into leaking structures, through the process of polymerization, a permanent flexible water barrier is formed.

The liquid retains its initial low viscosity upon contacting water allowing it to flow without dilution. Once the **CICO 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

- **CICO POLYGROUT** has very remarkable solidifying property even in ground where water flow is violent. It stops water from oozing and solidifies the ground with high strength.
- **CICO POLYGROUT** imparts successful solidifying property in all types of water, such as seawater, mineral water or that containing slight acid and alkali.
- **CICO POLYGROUT** is extremely stable both chemically and physically and will not be damaged by any bacterium.
- **CICO POLYGROUT** is completely non-pollutant to the water it contacts and has no effect on potable water, fish or marine life.
- **CICO POLYGROUT** possesses excellent adhesiveness to solid particles and is therefore useful in landslide prevention.
- **CICO POLYGROUT** does not wash away or is not diluted by the ground water.

BUILDING CONSTRUCTION USAGE

- Prevention of water from leaking into underground (basements, tanks, sumps, pits etc.);
- Soil stabilization for foundations.
- 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 bedding 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.
- Stabilization 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 tunnel shield construction.
- Preventing air from leaking during compressed air shield construction or caisson construction.
- Facilitates supportability of pile and pier.
- Increases bearing capacity of underpinning
- Prevention of crown collapse in tunnels.

ENVIRONMENTAL ENGINEERING AND OTHER APPLICATION

- Solidifying agent to atomic, industrial and chemical waste solutions or wastewater.
- Solidifying agent for sewage and sludge removed from organic and inorganic waste dumps.
- Preservation of historical relics, harbour engineering, mining reclamation engineering etc.

IMPREGNATION METHOD

CICO POLYGROUT is generally pumped as a single component through low pressure hand-operated pumps or special high pressure pumps as required. Hoses are fitted with packers/injection nipples with valve which is sealed against back-pressure with quick-setting cement. The surface is sealed/patched properly to prevent from coming out. **CICO POLYGROUT** reacts with water and expands to form a 'fluid wedge' & 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.

TECHNICAL DATA

Appearance	Light-yellowish transparent liquid
Viscosity(cps) at 25°C	800 ± 100
Specific Gravity(at 25°C)	1.08 ± 0.02
Corrosiveness	Non-corrosive
Toxicity	Non-toxic
Flammability	Non-inflammable
Gelation	Highly strong elastic gel

STORAGE

Store in dry cool area.

SHELF LIFE

If stored properly in unopened containers a shelf life of approximately 12 months could be expected.

PACKAGING

Available in 5 Kg & 20 Kg drum.

Important Note:

All CICO products are sold in the market after strict Quality Control in line of ISO 9001 and guaranteed against any manufacturing defect. Although the basic formulation of Company's products generally remains unchanged, production refinements arising from continuing research and evaluation program may occasionally result in marginal changes in properties. CICO aspires to ensure that any recommendation, advice, test data, specification, method statement and other information given in this product datasheet is accurate and best of company's knowledge. Since, the company (CICO TECHNOLOGIES LTD) has no control over the selection of its product, applicators, application methodology, how and where it is applied, therefore, the company cannot accept any liability directly or indirectly arising from the use of its product. It is important to any customer, user or specifier satisfies him / herself that the product is suitable for the intended purpose including health, safety and environmental aspect. Unless or otherwise agreed in writing, all products of the company are sold strictly pursuant to the terms of our standard conditions of sale which are available upon request. All information and technical assistance is given without warranty or guarantee and is subject to change without notice. All customers, users, specifiers should ensure that they examine the suitability of the product with company's latest product data sheet.

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