



SOLHYDGROUT 900 FS

Fast-Setting Portland Cement based Microfine Grout
for Soil and Rock Injection, Seepage Control, and Ground Stabilization

SOLHYDGROUT 900 FS is a fast-setting, Portland cement based microfine grout, with integrated admixtures, specifically engineered for injection applications into low-permeability substrates such as tight fissures, joints, and porous soil or rock masses.

■ USES

SOLHYDGROUT 900 FS is intended for specialized grouting and injection applications requiring a rapid-setting, highly penetrative cementitious solution.

TYPICAL USES:

- Injection into rock fissures
- Seepage control and hydraulic sealing in rock masses
- Stabilization of slopes, tunnels, and underground structures
- Pre-injection in mining or excavation works
- Filling microvoids at concrete/rock interfaces
- Curtain grouting in dams, foundations, and retaining structures
- Consolidation of fractured or loose soil or rock masses

■ PRODUCT FEATURES

- Fine particle size distribution (D95 \approx 28 μ m)
- Blaine fineness > 900 m²/kg
- High fluidity: 30 - 35 seconds with Marsh cone (10 mm)
- Rapid setting: initial set in 60–120 min. and final set in 120–150 min.
- Superior penetrability into micro-cracks and tight voids
- Compatible with standard injection equipment
- Reduced injection downtime, enabling faster construction cycles
- High durability and stability without segregation
- Optimized for use with colloidal mixers and piston pumps
- Special formulation with integrated admixtures avoiding/minimizing on site admixtures addition

■ SURFACE PREPARATION

Ensure the substrate (soil or rock face) is stable and accessible. Clear any free water or debris from boreholes. Boreholes should be flushed and prepared according to injection plan specifications. Ensure all equipment is clean and free of set materials before mixing and pumping.

■ PRIMING

Not applicable for injection applications. However, ensure borehole walls are saturated surface-dry (SSD) for optimal bond and sealing performance.

■ PRECAUTIONS / RESTRICTIONS

- Do not apply when ambient temperatures are below 5°C (41°F) or above 35°C (95°F) without specific measures.
- Risk of autogenous shrinkage if not injected into confined mass or if not properly cured.
- Always test compatibility with site-specific admixtures, aggregates, and conditions before use if needed
- Always validate product suitability for the considered rock conditions

MATERIAL PHYSICAL PROPERTIES @ 20°C (68°F)

GENERAL CHARACTERISTICS (USING 16 LITERS OF WATER PER 20 KG BAG)	
PROPERTY	VALUE
Blaine Fineness	>900 m ² /kg
Flow Cone (ASTM C939)	10–15 seconds
Marsh Cone (10 mm)	30–35 seconds
Fresh Grout Density	1,520 kg/m ³ or 1.52 kg/L
Initial Set (ASTM C266)	60–120 minutes
Final Set (ASTM C266)	120–150 minutes
Bleeding	≤2%
Application Temperature	5°C to 35°C



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■ PRODUCT MIXING

MIXING

- Use clean, potable water for all mixing operations.
- Recommended water content: 12–16 Liters per 20 kg bag.
- Use a high-speed colloidal mixer (minimum 1500 rpm) to ensure optimal dispersion and activation of the microfine particles.
- Pour the measured water into the mixer first, then add SOLHYDGRROUT 900 FS gradually while mixing continuously.
- Minimum mixing time: 2 to 3 minutes. *Avoid mixing for more than 3 minutes total to prevent premature setting due to heat buildup.*
- Maintain grout temperature between 15°C and 30°C during mixing.

INJECTION

- Pump the grout immediately after mixing using suitable equipment, such as piston or screw-type pumps.
- Maintain continuous grout flow during injection to prevent blockages and setting in lines.
- Grout should be injected while still fresh—ideally within 30 minutes of mixing.
- If extended workability is needed, contact your technical representative.

HARDENING

- Allow the grout to harden for approximately 2 to 2.5 hours before resuming drilling, re-injection, or related works.

■ PRODUCT APPLICATION

- Inject into fine rock fissures, joints, and voids as specified.
- Ideal for pre-injection in tunneling, mining, and underground works.
- Use for hydraulic sealing and seepage control in dam foundations and retaining structures.
- Effective for slope stabilization and consolidation grouting in fractured rock.
- Fill microvoids and contact gaps between concrete structures and rock masses.
- Follow site-specific grouting patterns and pressure sequences for optimal performance.

■ CURING

No special curing is required for subsurface injection applications. For surface-exposed grout, maintain moisture using wet burlap or apply an approved membrane-forming curing compound.

■ ESTIMATING / YIELD

A 20 kg (44 lb) bag of SOLHYDGRROUT 900 FS yields approximately 23.7 liters (0.84 ft³) of mixed grout using 16 Liters of water per bag. Actual yield may vary based on consistency.

■ PACKAGING

SOLHYDGRROUT 900 FS:

20 kg (44 lb) bags
56 bags per pallet

■ RECOMMENDED TOOLS

The following tools will assure a cost effective, satisfactory installation:

- High-speed colloidal mixer (≥1500 rpm)
- Grout injection pump (piston or screw-type)
- Mud balance, flow cone
- Clean water supply
- Personal protective equipment

■ CLEANING

Use water and soap to clean all tools immediately after use.

■ STORAGE

Store in a dry, enclosed area on pallets or skids to avoid contact with ground moisture. Shelf life is 9 months in unopened packaging under proper storage conditions.

■ SAFETY

See Material Safety Data Sheet.

Contains portland cement and silica. May cause skin or eye irritation. Avoid contact and inhalation. Wear suitable PPE when handling. In case of eye contact, rinse thoroughly and seek medical advice.