

Description

AC 100 is a two-component, ultra-low viscosity acrylic injection resin formulated for ground consolidation, soil permeation and sand binding applications. Upon mixing of the two components a controlled chemical reaction occurs, forming a flexible, water-resistant gel that permeates and binds granular soils, sands and silts to create a stabilised mass suitable for excavation, tunnelling and civil remediation works.

AC 100 is non-corrosive, non-toxic and compatible with standard twin-piston injection equipment, inflatable packers and remote CCTV-guided packer systems. It is available in two grades: AC 100 and AC 100 EST (Extended Set Time) for applications requiring longer working times.

Benefits

- Ultra-low viscosity near water-like consistency for deep soil penetration
- Penetrates fine silts, sands and silty clays inaccessible to cementitious grouts
- Binds and consolidates loose granular soils and running sands
- Adjustable gel time from seconds to over one hour via accelerator dosage
- Flexible cured gel accommodates minor ground movement without cracking
- Hydrophilic gel remains stable in wet and saturated ground conditions
- Non-toxic acrylic polymer system
- Compatible with inflatable packer and remote CCTV-guided packer systems
- Pumpable using standard twin-piston two-component injection equipment

General Applications

- Ground consolidation and soil permeation grouting
- Sand binding and running sand stabilisation prior to excavation
- Pre-excavation ground treatment for tunnels, basements and shafts
- Groundwater cut-off and permeability reduction in granular soils
- Back grouting of pipe joints — sewer mains, storm drains and culverts
- Manhole and junction structure back grouting and infiltration control
- Remote pipe joint sealing using inflatable packer and CCTV systems
- Curtain grouting against structural walls and buried infrastructure
- Void filling in sub-surface structures, retaining walls and embankments

Application Guidelines

AC 100 is injected at a 1:1 ratio (Part A : Part B) by volume using a twin-piston two-component injection pump. For remote pipe joint applications, the resin is pumped through CCTV-guided inflatable packer equipment positioned over the target joint or defect. The packer end bladders are inflated to isolate the section, grout is injected under low pressure through the joint into the surrounding soil, and a post-injection air pressure test confirms the seal before the packer is moved on.

AC 100 Mixed Properties	
Appearance	Clear to pale yellow liquid
Solids Content	~10%
Viscosity @ 25°C	<5 mPa·s (near water)
Density @ 25°C	1.02 g/cm ³
Mix Ratio (by volume)	1:1 (Part A : Part B)
Elongation (cured gel)	>90%
Toxicity	Non-toxic

For ground consolidation and soil permeation, inject via lances or TAM (tube-a-manchette) at predetermined spacing to form overlapping treatment bulbs. Commence injection at the lowest point and progress upward. Injection pressure should be controlled to prevent hydro-fracture — increase from zero only to the minimum pressure required to displace resin through the soil.

Clean all equipment immediately after use with copious amounts of clean water before the resin sets. Once the accelerator is added to Part A it should be used within 24 hours. Never use metal containers — contact with metallic surfaces may cause premature reaction without Part B.

Gel Times

Gel time is controlled by accelerator dosage added to Part A prior to mixing. To determine the correct dosage on site, conduct a trial using two equal volumes of Part A and Part B in separate containers, add the accelerator to Part A, then combine and time until gellation. Larger mixed volumes will react faster — always conduct site trials under prevailing temperature conditions before commencing injection works.

% Accelerator (by wt Part A)	AC 100 @ 20°C	AC 100 @ 30°C	AC 100 EST @ 25°C
4%	5 min	2 min	49 min
6%	90 sec	45 sec	29 min
8%	1 min	30 sec	20 min
10%	30 sec	15 sec	11 min

Data based on 100 ml samples at stated temperatures. Site trials must be conducted to confirm correct dosage. Larger volumes gel faster.



Packaging

AC 100 is supplied in 40 kg packs. Accelerator is supplied in 1 kg bottles. Packaging sizes may vary subject to local regulations and project requirements. Contact your local representative for alternative pack sizes.

Storage

Store between 10°C and 35°C in dry conditions away from direct sunlight. If stored correctly in unopened original packaging: Part A shelf life 12 months, Part B shelf life 3 months. Reseal containers immediately after use.

Health & Safety

AC 100 should only be used as directed. We always recommend that the Safety Data Sheet is carefully read prior to application. Our recommendations for protective equipment should be strictly adhered to for your personal protection. Please contact your local representative for the current SDS.

