

PRODUCT DATA SHEET

Sikacrete®-114 AE

FREE FLOWING MICRO-CONCRETE FOR GROUTING AND REPAIR

DESCRIPTION

Sikacrete®-114 AE is a one component, free-flowing, high strength, shrinkage compensated, cement based micro-concrete with a maximum aggregate size of 10 millimeter.
Suitable for use in hot and tropical climatic conditions.

USES

Sikacrete®-114 AE is used for the structural repair of deteriorated concrete.
It is ideal for casting sections or members where the volumes required are too large for conventional grouts and too small and inaccessible for normal concreting applications.
A typical application is the re-profiling of damaged concrete members, using formwork.

FEATURES

- One component, requires the addition of water only
- Reduced waste and risk of mixing failures
- Easy to mix, apply and finish
- Economical
- Excellent adhesion
- Shrinkage compensated
- Rapid strength development
- Compatible with the properties of typical concrete
- Vapour permeable

PRODUCT INFORMATION

Composition	Portland cement, selected fillers and aggregates, special additives
Packaging	40 kg bag
Appearance and colour	Grey mix of powder and aggregates
Shelf life	12 months from the date of production
Storage conditions	Store in original unopened packaging in cool and dry condition between 5 °C and 35 °C. Protect from direct sunlight, heat and moisture.
Density	~2.4 kg/l (25 °C) (fresh mortar)
Maximum grain size	Max. 10 mm

TECHNICAL INFORMATION

Compressive strength		1 Day	7 Days	28 Days	(ASTM C109)
	3.5 L water / 40 kg at 25 °C	≥ 35 N/mm ²	≥ 50 N/mm ²	≥ 65 N/mm ²	
Modulus of elasticity in compression	~33 000 N/mm ²				(ASTM C469)
Expansion	~0.055 % (28 d)				(ASTM C157)
Tensile adhesion strength	≥ 1.5 N/mm ²				(BS 1881, Part 207)

APPLICATION INFORMATION

Mixing ratio	3.5 – 3.75 L of water per 40 kg bag
Yield	~18.2 L / 40 kg bag
Layer thickness	Min. 50 mm per pour Max. 500 mm per pour Note: Higher thicknesses in one pour can be achieved by "bulking", please contact Sika Technical Services for advice.
Pot Life	~2 h (23 °C)

BASIS OF PRODUCT DATA

All technical data stated in this Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

IMPORTANT CONSIDERATIONS

- Ensure formwork is secure and watertight to prevent movement and leaking during placing and curing.
- At high ambient temperatures use chilled water for mixing to keep grout temperature below 30 °C.
- In hot weather, base plates and foundations must be shaded from direct sunlight. Condition bags < 30 °C prior to use.
- Depending on requirements and site condition, the addition of dry, single size, clean coarse aggregates is possible ("bulking") up to 100 % by weight of the dry grout powder. Trials are recommended to confirm suitability of aggregates to be employed.
- For additional information on Sikacrete®-114 AE or other grouting materials contact Sika Technical Department.

ECOLOGY, HEALTH AND SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

SUBSTRATE QUALITY / PRE-TREATMENT

Concrete surfaces should be clean, sound and free from oil, grease, cement laitance and all loosely adhering particles.

Absorbent surfaces should be saturated thoroughly with clean water.

Metal surfaces (iron and steel) should be free from scale, rust, oil and grease.

BONDING AGENT AND STEEL PROTECTION

Embedded reinforcing steel should be free from scale, rust, oil and grease, and treated with a suitable anti-corrosion coating such as SikaTop® Armatec® 110 EpoCem® or SikaEmaco®-8100 AP.

The application of a suitable bonding agent, such as Sikadur®-32 LP, Sikadur® ADH 1414 or SikaTop® Armatec® 110 EpoCem®, will improve adhesion on large areas or where particularly dense concrete substrates are involved.

