

PRODUCT DATA SHEET

Sikacrete[®]-180 AE

CEMENTITIOUS, HIGH STRENGTH, NON-SHRINK, PRECISION GROUT
Formerly known as: Sika[®]Repair MC - 80

DESCRIPTION

Sikacrete[®]-180 AE is a cementitious, pre-bagged, free flowing, one component, non-shrink precision grout with high early and ultimate strength. Suitable for use in hot and tropical climatic conditions

USES

Sikacrete[®]-180 AE precision grout is used for grouting various applications such as:

- Machine foundations
- Columns in precast construction
- Concrete anchors
- Cavities, gaps and recesses
- Base plates
- Bridge bearing
- Structural concrete repairs

CHARACTERISTICS / ADVANTAGES

Sikacrete[®]-180 AE is an easy to use precision grout requiring only the addition of water. It offers the following beneficial properties:

- Easy to mix
- Very good flow characteristics
- Adjustable consistency
- Moderate heat of hydration
- Shrinkage compensated
- High final strength
- Non-flammable
- Non-corrosive
- Pumpable

PRODUCT INFORMATION

Composition	Portland cement, selected fillers and aggregates, special additives
Packaging	25 kg and 40 kg bag
Appearance / Colour	Grey powder
Shelf life	12 months minimum from date of production
Storage conditions	Store in original unopened packaging in a cool and dry condition between 5 °C and 35 °C. Protect from direct sunlight, heat and condensation.
Density	~2.35 kg/l (25 °C) (fresh mortar)
Maximum grain size	~5 mm

TECHNICAL INFORMATION

Compressive strength	(25 °C)	1 Day	7 Days	28 Days	(ASTM C109)
	W/P = 0.13 (3.25 L water / 25 kg)	≥ 30 N/mm ²	≥ 65 N/mm ²	≥ 80 N/mm ²	

APPLICATION INFORMATION

Mixing ratio	Consistency	Water (L) per bag (kg)	Water / Powder Ratio
	Flowable	3.0 - 3.25 L per 25 kg bag	0.12 - 0.13
	Flowable	4.8 - 5.2 L per 40 kg bag	0.12 - 0.13
Yield	~12 L / 25 kg bag ~19 L / 40 kg bag		
Layer thickness	Min. 25 mm per pour Max. 200 mm per pour		
Ambient air temperature	+5 °C min. / +35 °C max.		
Substrate temperature	+5 °C min. / +35 °C max.		
Pot Life	~60 min (+25 °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.

FURTHER INFORMATION

Method Statements:

- Recasting - Pouring
- Pumping

IMPORTANT CONSIDERATIONS

- Ensure formwork is secure and watertight to prevent movement and leaking during placing and curing.
- When maximum thickness exceeds 200 mm, consider the use of Sikacrete® -114 AE.
- At high temperatures, use chilled water for mixing to keep the grout temperatures 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 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®-180 AE or other grouting materials contact Sika's 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.

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY / PRE-TREATMENT

Concrete surfaces should be clean, rough, 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 steel reinforcing should be free from scale, rust, oil and grease, and treated with a suitable anti-corrosion coating such as SikaTop® Armatec®-110 EpoCem®.

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

MIXING

Add water according to the desired consistency into a clean mixing vessel before slowly adding the Sikacrete®-180 AE powder. Sikacrete®-180 AE is best mixed in a forced action mixer, for 2 to 3 minutes or until the mix is free of lumps, not longer than 5 minutes. Slow speed drill (maximum 500 rpm) can be also used for mixing. Normal tumble type concrete mixers are not suitable. Do not mix more grout than can be placed within 15 to 20 minutes. Do not add extra water or other ingredients. Mix only full bags for the best result.

APPLICATION

Before pouring let the mixed grout stand for approximately 5 minutes after mixing to allow entrapped air to escape. Pour into the prepared area such that the grout has the shortest distance to travel. Ensure that air displaced by the grout is allowed to escape. When carrying out the base plate grouting, ensure a sufficient head of pressure to keep the mortar flowing. All exposed areas of the mortar surface should be kept as small as possible.

CURING TREATMENT

Treat exposed surfaces with Antisol- WB curing compound or use other approved curing methods such as polyethylene sheeting or wet hessian. Do not commence fogging until final set has been reached.

CLEANING OF EQUIPMENT

Clean equipment and mixer immediately after application with water. Hardened material can only be removed mechanically.

LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for exact product data and uses.

LEGAL NOTES

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

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ISO 14001: Sika UAE LLC,
Sika Gulf B.S.C. (c),
Sika Saudi Arabia Co. Ltd
OHSAS: Sika UAE LLC,
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All products are supplied
under a management
system certified to conform
to the requirements of the
quality, environmental and
occupational health &
safety standards ISO 9001,
ISO 14001 and OHSAS
18001.

Product Data Sheet

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