

PRODUCT DATA SHEET

Cavex®

EXPANSION AGENT FOR MASONRY INFILL AND GROUT INJECTIONS

DESCRIPTION

Cavex® is an expansion agent containing a blend of aluminium powder and other ingredients and is used in cement grouting situations wherever a controlled expansion to compensate for water loss and plastic settlement is required. Cavex® has been formulated for use in Portland cement grouts and masonry blockfill to provide expansion after placement of grout, before initial set occurs.

USES

Cavex® is ideal for all types of cement based grouts where a post placement volume increase of the wet mix is desirable to maintain adhesion to all adjacent surfaces. Applications range from neat cement / water grouts through to masonry blockfill. Typical uses are:

- Ready mixed grout for blockwork, brickwork cavities
- Neat cement grouting for cable ducts, ground anchors, stabilisation work, etc.
- Sand / cement mixes for grouting behind tunnel linings, pipe sleeves, etc.

CHARACTERISTICS / ADVANTAGES

- Eliminates plastic settlement in the grouting mix
- Produces a controlled expansion before initial setting. As porous masonry blocks absorb water from the grout the plastic expansion maintains a contact pressure at the interface until the blockfill starts setting. The blockfill can then bond with the masonry unit to become a composite structure
- Provides improved bond between hardened masonry blockfill and both the reinforcement and inner surfaces of the masonry cells
- Provides a volume increase to wet mixes - helping to fill voids in tunnel linings, cable ducts, etc.
- Eliminates the need for revibration - enabling grout lift height limitations to be relaxed, as allowed for in the NZ Masonry Filling Standards
- Produces a stable and plastic grout - prevents the upward movement of bleedwater which would otherwise become trapped underneath the lower faces of reinforcement and other projections.

PRODUCT INFORMATION

Packaging	800 g pots
Appearance / Colour	Silver grey powder
Shelf Life	Six (6) months when stored according to stated conditions.
Storage Conditions	Store in unopened, original containers in cool dry conditions below +25°C.
Total Chloride Ion Content	Nil

TECHNICAL INFORMATION

Indicative Performance of Mortar Mix	TYPICAL VOLUME EXPANSION OF BLOCKFILL: Approx. 4 - 5 % (Determined by measuring the rise of the upper level of blockfill in a glass cylindrical mould)
--------------------------------------	--

APPLICATION INFORMATION

Recommended Dosage	Ready Mixed Blockfill: Use 800g of Cavex® for each m ³ of masonry blockfill
Ambient Air Temperature	APPLICATION TEMP: +5°C to +30°C. Temperatures above 30°C will significantly increase volume change

APPLICATION INSTRUCTIONS

MIXING

Suitability: For all types of Portland cement based grouts and injections. **Compatibility with other Sika Admixtures:** More effective when used in conjunction with water reducers. Retarders, accelerators or air entrainers should not be used without undertaking trials.

Ready mixed blockfill (Grout):

- Cavex® should be added to the mix in the truck just prior to placement to ensure that the reaction period for the admixture is not exhausted before the grout is placed
- Bring the blockfill mix back to the top of the bowl until it is easily accessible. Empty the predetermined dosage onto the surface of the mix
- The mix should then be agitated for 5 minutes to ensure complete and thorough distribution of the Cavex® has been achieved.

Site based cement/water grouts and injections:

- Wherever possible the required dosage of Cavex® should be premixed with the gauging water just prior to the mixing of the grout.
- Alternatively the Cavex® can be added directly to the dry cement or cement / sand mixture.
- The grout mixture must be continuously stirred prior to and during placement

LIMITATIONS

- Concrete masonry infill grouts should have a spread value >450 mm before the introduction of Cavex®
- Specimens of blockfill for compressive strength testing must be prepared in moulds with a top plate that provides effective restraint to expansion. Compressive strength of specimens formed in these moulds is not significantly reduced

- Expansion will not occur at temperatures below 5°C
- All placing and consolidation work should be completed within 60 minutes at temperatures <15°C and within 45 minutes above 15°C
- Restraint of plastic blockfill (containing Cavex®) will be required along the top face of the blockwork to allow for effective expansion to occur
- When using Cavex® in a 'stacked block' system, it is important to ensure that the 'columns' of blocks at each end of the wall are well supported with props and braces (in the plane of the wall).

BASIS OF PRODUCT DATA

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

LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the performance of this product may vary from country to country. Please consult the local Product Data Sheet for the exact description of the application fields.

ECOLOGY HEALTH AND SAFETY

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety-related data.

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. It may be necessary to adapt the above disclaimer to specific local laws and regulations. Any changes to this disclaimer may only be implemented with permission of Sika® Corporate Legal in Baar.

Sika (NZ) Limited
85-91 Patiki Road
Avondale, Auckland 1026
New Zealand
0800 745 269
www.sika.co.nz



Product Data Sheet
Cavex®
November 2018, Version 01.01
020301010020000015

Cavex-en-NZ-(11-2018)-1-1.pdf

