

Simply clever building materials.

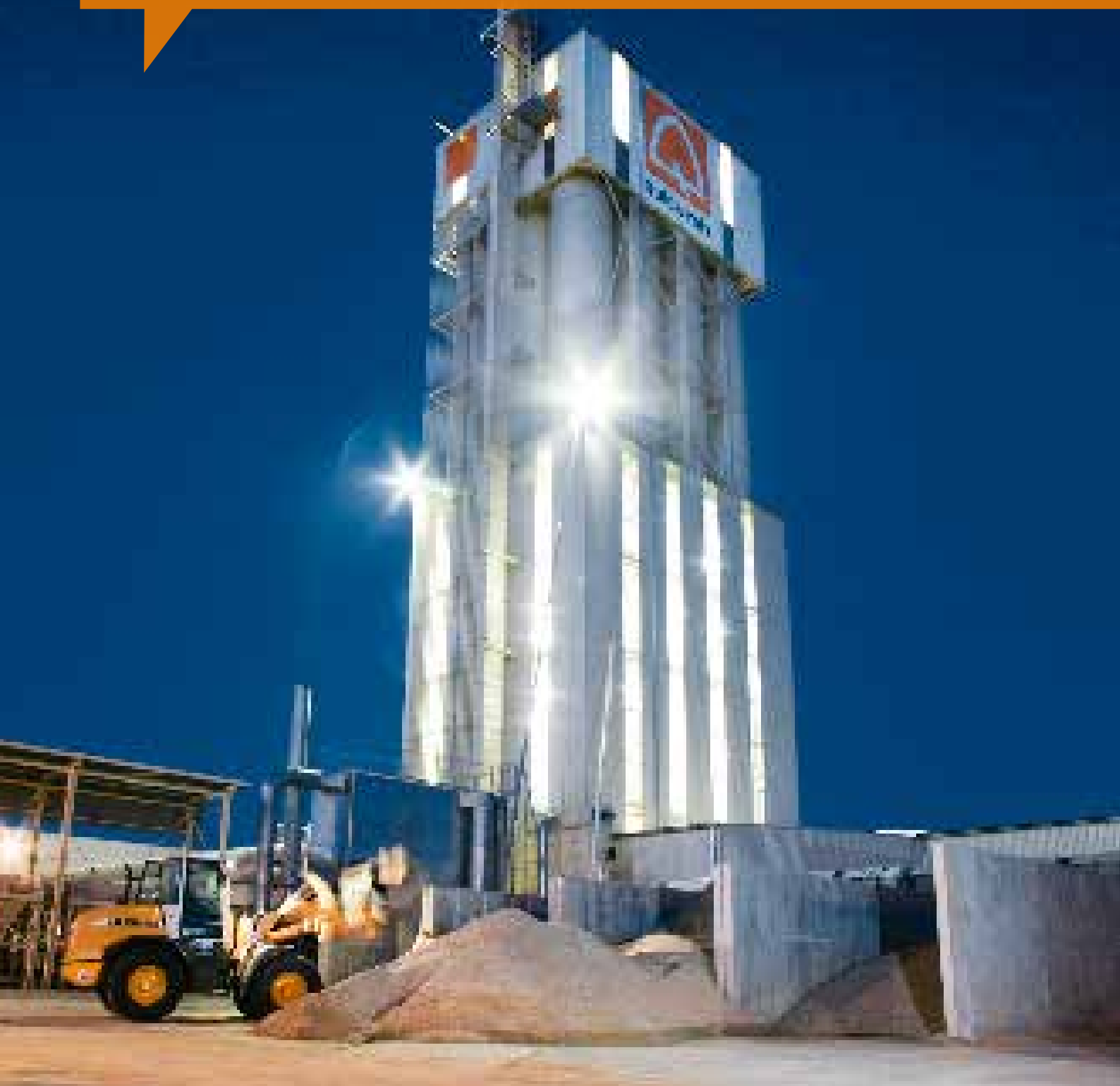


[www.quick-mix.de](http://www.quick-mix.de)

## Mining and Civil Engineering

Customised building materials  
for geotechnical applications.

More than 40 years of experience.



The quick-mix group is one of the leading manufacturers of mineral based dry building materials. Our pre-mixed dry mortar products are ready for use with the simple addition of water yielding uniform grout and gunite with constant quality. The main objective at quick-mix is to provide individual solutions that meet the highest quality standards and thus ensure maximum reliability. We achieve this by means of a sophisticated quality management system and the in house research and development with a willingness to embrace innovation. This explains why quick-mix construction materials are playing an essential role in mining and civil engineering for more than four decades.



## Part of a strong group

The quick-mix group is proud to be part of the Sievert AG with associates in various sectors of the construction industry. Thus the quick-mix group has access to many areas of expertise, including concrete technology, construction chemicals and logistics.



 **quick-mix group:** Dry mortar

 **Heinrich Hahne:** Construction chemicals

 **Sievert Handel Transporte:** Logistics



With us there is always a solution.



## Our Services

With production plants in China, Germany, Luxembourg, Poland, Russia, Slovakia and the Czech Republic, quick-mix produces mineral construction materials that are designed to meet extreme requirements in mining and civil engineering, whether above ground, underground or in water. Besides producing building materials, quick-mix is actively involved in research and development in order to create individual products for specific applications. quick-mix also provides expertise on which clients and project planners can rely, particularly in the earliest design stage.

### Mining

With more than 40 years of know-how in mining, quick-mix is one of the longest serving suppliers to the German coal mining industry. The knowledge we have gained in this field, enables us to successfully offer our solutions and services for international projects. In addition, our products that are developed specially for the mining industry not only increase the level of safety, but also significantly reduce costs in the construction of mining infrastructures such as roadways and caverns.

### Civil engineering

The key advantage of dry building materials is the possibility of creating customised solutions for the widest variety of applications that are typically found in civil engineering and underground works. When it comes to complex projects, where sustainability is a key issue, it is essential to provide products and solutions that meet these requirements. That is why quick-mix products have been used in all kinds of civil engineering and underground projects for many years.



## Our Products

Our wide range of mineral products includes various types of dry mortar and concrete, as well as special customised products that are developed and produced to meet the customer's specific requirements. All of the products are available in paper bags, big bags or bulk.

- Thixotropic anchor mortar
- Injection grout
- Backfilling
- Backfilling mortar for bore holes
- Micropile grouting
- Annular space backfilling of tubbings
- Dry shotcrete
- Early-strength consolidation gunite
- Rehabilitation shotcrete
- Abrasion resistant gunite
- Free flowing grout
- Sewer and manhole mortar
- Hydrostable mortar

quick-mix anchor mortar.





quick-mix offers a range of anchor mortars with different properties to suit various types of application. They are used for excellent bonded anchoring of rock anchors of all kinds in the mining industry, tunnelling and civil engineering, for the stabilisation of slopes, trenches, rock faces and suspended equipment.



## Injection Grout

### AM 1000-1 IBO

quick-mix AM 1000-1 IBO requires only the addition of water to form a pumpable injection grout. It is used in difficult ground conditions in tunnelling and mining constructions where self drilling rock bolts, injection bolts and cable bolts are used. AM 1000-1 IBO grout has minimised shrinkage and an expansion rate of 1.4 % whilst maintaining excellent flow and pumping properties.

### VP III | VP IV

quick-mix VP III is used as an injection mortar for filling voids and roof cracks of all kinds, for subsequent injection for the purpose of rock stabilisation, for contact injection in tunnel construction, for the injection of cracks in masonry and concrete elements. The VP IV injection grout with the Hydrocrete® additive is hydro-stable and ideal where water inflow and wet conditions as well as high temperatures are an issue.

## Thixotropic Anchor mortar

### AM 1000-1 | AVG QM

AM 1000-1 and AVG QM require only the addition of water to form a high strength pumpable thixotropic construction grout. They have minimised shrinkage and good pumping properties and ensure excellent bonding to the rock bolt. They are ideally suited for use in overhead work and vertical boreholes.

### AM 50S

AM 50S is a thixotropic fast setting construction grout for anchoring of all kinds where rapid strength gain is an important requirement. It has minimised shrinkage and good pumping properties, ensures excellent bonding to the rock bolt and is also ideally suited for use in overhead work and vertical boreholes.



quick-mix backfilling materials.





There are many fields of application for quick-mix backfilling materials in mining, underground works and civil engineering. Backfill materials are used for dam construction in mines, for roadway linings, for filling shafts, voids and overbreaks, for annular grouting in TBM tunnelling and for injection grouting and pipe roofing. quick-mix provides a range of different backfill materials, which can also be modified and produced according to the customer's specific requirements.



## Backfilling

### DM 1

quick-mix DM 1 backfill mortars are a series of dry mortars that can be designed to meet various technical requirements, with compressive strengths of up to 45 MPa. DM 1 mortars are used mainly in the construction of linings in mining roadways and are ideal for use with support systems based on geo-fabrics. DM 1 products have excellent pumping properties and are the perfect choice for overcoming long conveying distances without segregation. They can be designed for pneumatic as well as for hydraulic conveyance.

### Backfilling mortar for bore holes

quick-mix backfilling mortar can also be designed with the perfect properties for sealing annular spaces in well sinkings and for backfilling of boreholes and wells.

## Micropile grouting mortar

Depending on the type of application, various types of quick-mix backfilling or injection grout can be used for grouting micropiles, ensuring excellent bonding and low shrinkage and thus optimum friction. Multistage and cost-intensive re-grouting can be avoided by using a specially formulated, expansive injection grout.

## Annular space backfilling of tubbings

In TBM tunnelling with segmental linings, an annular gap of up to 30 cm always remains between the rock and the outer surface of the tubbings. Generally this annular gap is filled by grouting to reduce or prevent, amongst other things, the settlement of the ground surface.

### RSM

RSM is a pumpable, flowing grout used for grouting the annular gap. Its particularly good flow characteristics ensure excellent distribution of the mortar throughout the gap. The RSM recipe can be designed to suit the specific project requirements.



quick-mix dry shotcrete.



quick-mix produces various types of pre-mixed gunite in different strength categories, ensuring uniform quality. They are specially designed to reduce rebound. quick-mix shotcrete products are used for soil and rock support in mining, tunnelling and civil engineering, and for slope stabilisation, construction pits and rock faces.



## Shotcrete

### B 8

quick-mix B 8 and KSB 8, with a maximum grain size of 8 mm, are used as a substitute for poured concrete and are able to bear static loading. They can be used as dry shotcrete (with or without accelerating additives) for rock and excavation support as well as for sealing rock surfaces to prevent weathering.

## Early-strength consolidation gunite

### Z01.8

Z01.8 gunite, with a maximum grain size of 4 mm, is used for all types of new construction and repair work. When designed without an accelerator additive, it can be used to create smooth surfaces.

### CM 45W

quick-mix CM 45W is formulated for dry application where rapid strength gain and low rebound are key requirements. In mining and tunnelling this product is applied for stabilising and strengthening ribs, roadways, roofing, back walls, underground workshops and embankments, for example. It is also used for concrete repair works to bridges, and for applications in marine environments. quick-mix CM 45W includes the Hydrocrete® additive, which provides the perfect solution in cases where water inflow, wet conditions or high temperatures may present a challenge.

## Abrasion resistant gunite

### FH 3S

quick-mix FH 3S, with a maximum grain size of 4 mm, is designed for applications where impact resistance and abrasion resistance are required. FH 3S gunite, containing hard concrete aggregates, is most commonly used for lining coal bunkers and crushing-machine bunkers in the mining industry. Further benefits are good workability, rapid strength gain to ensure minimal downtime of infrastructure, and high durability.

## Rehabilitation shotcrete

### MB 8 | MM 4

The rehabilitation shotcrete in this range contains microsilica additives and is ideally suited for use in new construction projects and for repairing old or damaged concrete elements, masonry and rock. This product is applied as dry shotcrete, whereby a layer up to 20 cm thick can be sprayed onto a vertical surface in a single application. The material has low rebound properties and is water impermeable, chloride-free, resistant to frost and de-icing salts and perfectly suited for use in overhead applications. quick-mix provides two types of rehabilitation shotcrete: MB 8, with a maximum grain size of 8 mm, and MM 4, with a maximum grain size of 4 mm.



quick-mix mortars  
for special fields of application.





Special applications call for special products. quick-mix responds to this demand with a range of building materials that provide the basis for successful construction projects in a wide range of fields, from the construction of wind turbine towers to sewer structures.



## Free flowing grout

In order to transfer loads across a larger surface area, suitable grouting is required under bearings for heavy elements that are anchored to concrete base plates. Grouting mortars are used in a wide range of applications: In addition to their use as grouting for foundations, they are also used for grouting under crane rails or for levelling the tower elements of wind turbines. Frequently these products are used for connecting precast non-ballasted rail track sections. quick-mix offers different types of the free flowing grout:

### QV 1000

QV 1000-1, -4 and -8 expansive free-flowing grouting mortars, with grain sizes of 1 mm, 4 mm and 8 mm, are capable of withstanding extremely high dynamic and static loads. QV 1000 has excellent flow properties and is shrink-free, impermeable to water and resistant to frost and de-icing salts.

### S-Fix

S-Fix quick grouting mortar is used in all applications where high loading occurs at an early stage. It is ideal for levelling of heavy beams or manhole covers, for example.

## Sewer and manhole mortar

### SBM

SBM sewer and manhole mortar is a sulphate-resistant mortar that is designed to meet the particular requirements of sewer and manhole construction. SBM, with a maximum grain size of 4 mm, has high chemical resistance, and has been specially developed for new construction projects as well as the rehabilitation of water structures. The aggregate has a particularly favourable grain distribution that ensures high-density of the masonry joints.

## Hydrostable mortar

### Hydrocrete®

Hydrocrete® is a hydrostable building material system that is highly erosion-resistant when fresh, enabling it to fall freely through water without any segregation or washing out of the cement, even when applied in flowing water. In its fresh state, Hydrocrete® of any consistency and with aggregates of any type and grain size can be used. These properties make the material particularly versatile. It can be designed, for example, as injection grout to withstand water ingress, for sealing and backfilling boreholes and wells under water, as shotcrete for stabilisation works and when tunnelling or sinking shafts through aquifers. Further areas of application are possible in water and coastal engineering, such as grouted revetments.





Creating references.



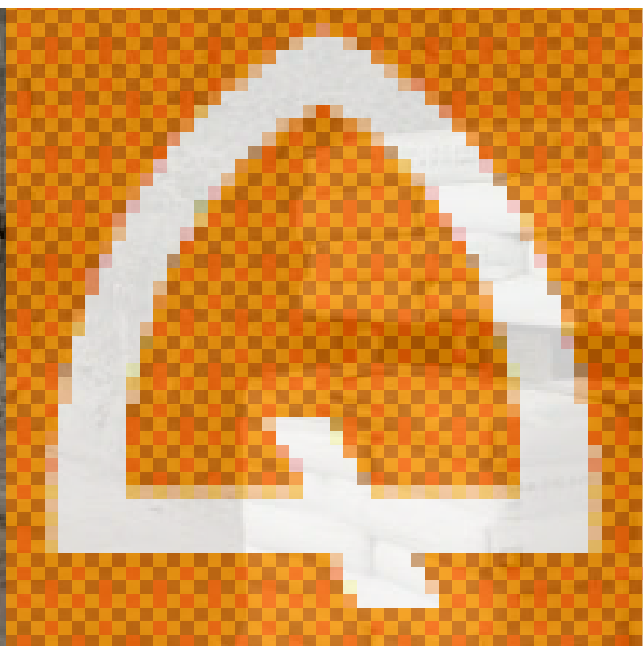
We are proud to report that, over the last 40 years, our expert consultancy services and high-quality building materials have been used in numerous successful construction projects. The challenges of our customers spur us on to continuously search for new and even better solutions.



## Reference projects

- RAG German Coal Mining, Germany, various type of anchor mortars and shotcrete
- Eurotunnel, England– France, **AM 1000-1 anchor mortar**
- Shaft Konrad, Germany, **AM 1000-1 anchor mortar**
- Wismut mining Shaft 371, Germany, **Z01.8 & CM 45W shotcrete**
- Elbphilharmonie Hamburg, Germany, **MM 4 rehabilitation shotcrete**
- Continental production plant, China, **QV 1000 expansive grout**
- Hydro dam Klingenberg, Germany, **VP IV injection grout**
- Lyon– Turin base tunnel, France, **AVG QM anchor mortar**
- Dachau bridge rehabilitation, Germany, **MB 8 rehabilitation shotcrete**
- Rosental sewage plant, Germany, **SBM sewer and manhole mortar**
- Deep construction pit, Berlin, Germany, **B8S shotcrete**
- Rehabilitation Augustowski Canal, Poland, **B8S shotcrete**





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