

1. General Safety Instructions

1.1. General

- This assembly manual contains information for the correct assembly and proper use of the products described below
- In addition, country-specific rules and regulations must be observed. Furthermore, specific site hazards must be considered during assembly.

In case of uncertainties or questions, please consult ROBUSTA-GAUKELEL.

- The depicted assembly states are to be understood as exemplary intermediate states; therefore, they may not always be completely correct from a safety perspective. In general, the regulations of the accident prevention regulations (Health and Safety Executive or equivalent) must always be observed.
- Unauthorized modifications to the components are not permitted. In case of deviations from this manual or any extended use, explicit approval from us is required. In such instances, we kindly request you to consult with the technical department of ROBUSTA-GAUKELEL Company.
- ROBUSTA-GAUKELEL is responsible for ensuring that a hard copy of this manual is available at the deployment site. The safety of the workforce in specific on-site situations is also the responsibility of ROBUSTA-GAUKELEL. In addition to this manual, a general risk assessment has been conducted by ROBUSTA-GAUKELEL; however, the on-site team must perform a risk assessment, taking into account the conditions and circumstances at the respective deployment sites. During assembly or installation, adherence to the hierarchy of measures outlined in the Occupational Safety and Health Act is mandatory.

1.2 Copyright

- This documentation is protected by copyright. Any use or modification outside the narrow limits of copyright law is prohibited and constitutes an offense without the consent of ROBUSTA-GAUKELEL GMBH & CO.KG..

1.3 Qualified and Authorized Persons

- Individuals who are qualified and authorized, based on their education and training, possess the capability to execute their designated tasks in accordance with technical standards while adhering to safety requirements. The on-site team is responsible for identifying such individuals

1.4 Warranty Claims

- ROBUSTA-GAUKELEL assumes no liability for damages:
 - In case of improper use/operation
 - When used in combination with accessories or fastening parts not supplied by ROBUSTA-GAUKELEL
 - In case of modifications to components and unauthorized alterations
 - In the event of improper assembly, maintenance, inspection, and upkeep
 - When using parts that are not original components
 - When operated by non-qualified and unauthorized individuals
 - Towards third parties

1.5. Checks

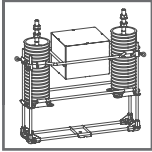
- The functionality of the product must be tested before assembly by a qualified and authorized person.
- All parts must be carefully inspected for damage or any other capacity-reducing impairments and replaced if necessary.
- The components and correct assembly must be regularly checked by a qualified and authorized person, adhering to this manual.
- Non-functional or damaged material must be stored and marked in a way that further use is precluded!
Only original parts from ROBUSTA-GAUKELEL are to be used.
- Illegible stickers or nameplates must be replaced!



**Important notice
for special
attention**



Visual inspection

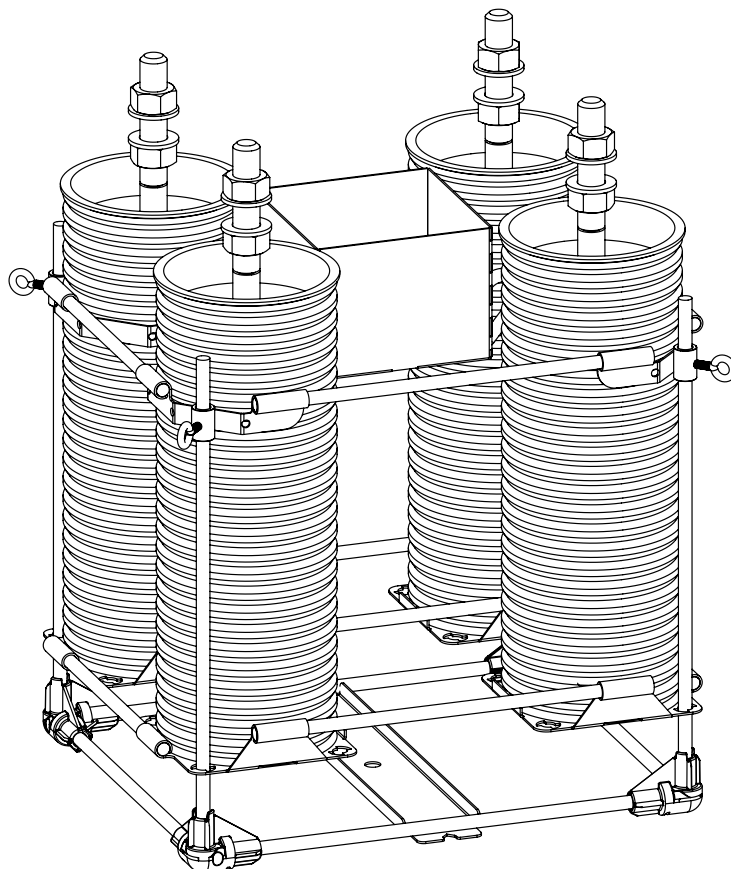


2. Intended use

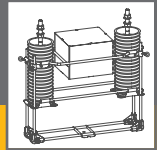
This grouting mortar is suitable for grouting work such as filling cavities, gaps, machine plates or for fixing components. It consists of cement, sand and other additives that improve its flow properties, strength and adhesion. It does not shrink during setting/hardening. It is a special non-shrinking mortar for the ROBUSTA anchoring sets for casting the anchor rods in the profiled anchor tubes and for relining the base plates when installing at a distance from the concrete floor.

The ROBUSTA anchor mortar has a certificate of conformity in accordance with the DAfStb guideline "Production and use of cement-bound grouting concrete and grouting mortar", (2019/07) Exposure class assignment in accordance with DIN EN 206-1:2001, moisture class according to DIN EN 206-1:2001 and is CE certified according to EN 1504-6:2006.

- Ready to use and easy to apply (mix with water)
- Pumpable screw/screw pump (BMP 6)
- High flowability with low water-cement ratio
- Impermeable to water (in accordance with DIN EN 12390-8) and vapour diffusible
- Very high early and final strengths
- Frost and de-icing salt resistant tested using the CDF method in accordance with DIN CEN/TS 12390-9
- Chloride ion content <0.05%
- Force-fit bond, can withstand static and dynamic loads
- Controlled increase in volume
- Regulated by building authorities
- Fire protection class A1
- Manufactured, tested and approved in accordance with DAfStb guideline
- Monitored and produced in accordance with DIN EN ISO 9001/2000
- Requirements according to DVG W-W 347 (hygienic requirements in the drinking water sector)
- Assignment of exposure classes in accordance with DIN 1045-2 / DIN EN 206-1



Example 4-piece-set



Bags of 25 kg – Item No. 165090



Parameter

Terms¹⁾

Grain size	0 – 4 mm
Grout height/installation thickness ²⁾	15 – 120 mm
Fresh mortar density	2,2 kg/dm ³
Coverage (25 kg-bag)	ca. 12 – 13 l
Consistency	high flowable
Flow class	f ₂ (650 – 740)
Correlation between flow value and spread value	ca. 2:1
Max. water quantity at +5°C / +20°C / +30°C	2,9 l / 2,6 l / 2,3 l
Water addition / mixing duration	4/5 water min. 2 min, 1/5 l water min. 2 min.
Pot life (20°C) ³⁾ depending on temperature	max. 90 min.
Application	+5 / +30 min./max. °C
Shrinkage class	SKVM II
Source dimension	ca. 0,9 Vol.-%
Water penetration depth (DIN EN12390-8)	ca. 1 mm
Calculation quantity	2000 kg/m ³
Strength development ³⁾	fast
Early strength class after 24 hours	A (≥ 40 N/mm ²)
Compressive strength ⁴⁾ 1 day / 28 days / 91 days	≥ 40 N/mm ² / ≥ 85 N/mm ² / ≥ 90 N/mm ²
Compressive strength ³⁾ 26 h at +5°C	5 N/mm ²
Final strength class	C60/75
Exposure classes ⁴⁾	X0, XC1-XC4, XD1-XD3, XS1-XS3, XA1-XA2, XF1-XF3
Moisture classes ⁵⁾	WO, WF, WA
Shelf life	12 months stored under cover, clear of ground, protected from all sources of moisture and frost
Packing	25 kg-bag; 40 bags per pallet (1 to.)
Appearance	grey powder

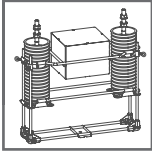
1.) Typical values of self-monitoring. All tests were conducted under laboratory conditions (21°C and 65% relative humidity).

2.) Reinforcements are to be arranged depending on geometry and pouring height.

3.) Low temperatures reduce fluidity and delay early strength, while high temperatures accelerate strength development and reduce working time.

4.) The compressive strengths shown are compressive strengths determined using prisms according to DIN EN 196-1 for grout mortar or cube strengths according to DIN EN 12390-3 with an edge length of 150 mm for grout concrete.

5.) According to DIN EN 206-1:2002 in combination with DIN 1045-2.



3. Processing instructions

3.1. Substrate pre-treatment

General grouting work:

The substrate must be prepared in accordance with EN 1504-10 Part 7. The substrate must be free of dirt, grease, sludge, loose concrete, loose particles or layers that could have a detrimental effect on adhesion. Remove all damaged concrete and prepare the substrate by sandblasting, shot blasting, high pressure water jetting or other methods until the base concrete is exposed to ensure sufficient roughness (bond) and open pores. The substrate must be moistened in advance with clean water until it is saturated. The substrate should be damp but not have any free-standing water. The substrate must be frost-free and have a surface tensile strength of at least 1.5 N/mm².

Grouting the anchoring set in particular:

The top of the pipes are sealed at the factory with a removable plastic cover to protect against the ingress of foreign bodies. These covers must also remain in place after concreting into the ceiling/floor slab until the anchor rods are installed and cast. However, if standing water gets into the pipe before the grouting mortar is applied, it must be completely blown out until the pipe wall is only damp.

If slurry has penetrated into the pipe during concreting, the bottom of the pipe must be sprayed free until the required embedment depth is reached.

The substrate must be cleaned of dirt, grease and all parts or layers that prevent adhesion. The component temperature (substrate surface) must be frost-free.

3.2 Mixing process

The ROBUSTA anchor mortar must be mixed using a suitable compulsory mixer (400-600 rpm). The mixing head must be completely immersed in the powder. Pour 4/5 of the required amount of water into the mixer and mix for 2 minutes. Add the remaining amount of water. The proportion of water can be varied to achieve the desired consistency. Never use more than the maximum permitted amount of water. Mix for a further 2 minutes until a lump-free, homogeneous mixture is obtained. The mixing time depends on the type of mixer. The minimum time is 4 minutes. The mixture must rest to release any air trapped during mixing. Once the mortar has been mixed, apply immediately.

Do not prepare more material than can be used within the working time of the material. If the material begins to set, mix again, but never add additional water.

3.3 Processing

The working time at 20° C is approx. 90 minutes; rest periods of more than 5 minutes between mixing and application should be avoided. Only whole containers may be mixed and processed.

Permissible temperature range during processing +5 to +30° C.

General casting work

The material is always poured or pumped from one side or corner in one continuous operation. Tight and non-absorbent formwork is required. Sufficient ventilation holes must be provided to prevent air entrapment. Do not use vibration. When grouting large areas, apply the grout using worm/screw pumps (BMP 6).

Casting the anchoring sets in particular

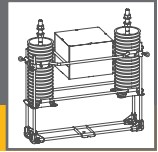
The material is always poured or pumped from one side or corner in one continuous operation. A tight and non-absorbent formwork is required and sufficient ventilation holes must be provided to prevent air entrapment. Do not use vibration. When grouting large areas, apply the grout using worm/screw pumps. Depending on the geometry and application thickness, reinforcing steel may be required. The lateral protrusion of the grouting material should be kept as low as possible (approx. 20 - 50 mm).

3.4 Post treatment

Curing must be carried out in accordance with EN 13670 in conjunction with DIN EN 1045-3. In warm or windy conditions, the applied material must be protected against drying out by atomising it with a fine mist of clean water or protective tarpaulins until the initial setting has taken place. In cold conditions, cover with insulated tarpaulin, polystyrene or other insulating materials.

Protect surfaces from frost and rain until final setting. In cold, damp or unventilated areas, it may be necessary to allow a longer curing period or use forced ventilation to avoid condensation. Never use a dehumidifier during the curing period or within 28 days of application.

It is recommended not to remove the formwork for at least 48 hours. The curing time should be at least 5 days. Post-treatment should take place as soon as possible; at the latest when the surface of the material starts to set. As an alternative to conventional treatment methods, suitable curings can be used to prevent rapid water loss.



3.5 Cleaning and care

The mixing tools should be cleaned immediately with clean water. Hardened material must be removed mechanically.

3.6 Notes

Under certain conditions, cementitious materials can lead to incompatibilities in conjunction with non-ferrous metals (e.g. aluminium, copper, zinc). Low temperatures slow down the material flow and delay early strength development. High temperatures can accelerate the strength development and reduce the processing time of the material. Depending on the geometry and application thickness, reinforcing steel may be required. The lateral protrusion of the grouting material should be kept as low as possible (approx. 20-50 mm).

4. Health and safety

ROBUSTA anchor mortar is a cementitious product and can therefore cause irritation to the skin and eyes. These should be protected during application.

Always wear protective clothing and gloves. Wearing a dust mask is strongly recommended. Rinse splashes on eyes or skin immediately with plenty of water.

Consult a doctor if irritation persists.

5. Storage

ROBUSTA anchor mortar can be stored for 12 months in a cool, dry and frost-free place in its original sealed container.

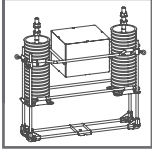
6. Disposal

Material that is no longer usable, defective or overstocked must be disposed of properly and professionally in accordance with the applicable legal regulations.

Further information



Catalogue 1.3. Anchoring set
please scan QR-Code



ROBUSTA-ANCHOR MORTAR ITEM NO. 165090

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ORIGINAL ASSEMBLY INSTRUCTIONS

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