ISOTAL

Non - shrinkage grouting mortar according to EN 1504-6 and CC mortar for structural repair of concrete class R4 according to EN 1504-3

- No contractibility
- High initial and final tensile strengths
- Liquidness
- Does not contain chlorides

PRODUCT DESCRIPTION	**Plasticized cement compound with grain size up to 3,15 mm, with shrinkage compensation and high initial and final strength.**
FIELD OF USE	Repair mortar class R4 according to EN 1504-3 (mortar for structural repair) and grouting mortar according to EN 1504-6. For grouting steel structures, anchors, machine base slabs, fundaments, joint sealing. For inside and outside application.
PRODUCT PROPERTIES	• No contractibility • High initial and final tensile strengths • Liquidness • Does not contain chlorides

PRODUCT DATA		
BASIC INFORMATION	**Appearance**	Grey powder
	Packing	30 kg in bag (plastificated) / 1260 kg (42 x 30 kg) on palette
	Storage and expiration date	12 months from date of production if stored properly in undamaged original sealed packaging in dry and cool conditions. Date of production is printed on packaging
TECHNICAL DATA	**Type of product**	Portland cement, selected aggregates and additives
	Bulk density of powder	1,42 kg/l
	Weight of fresh mortar	2,30 kg/l with water consumption 3,9 l/30 kg
		2,28 kg/l with water consumption 4,5 l/30 kg
	Grain size	D_{max}: 3,15 mm
	Linear deformation	< = 0,3 %
	Vakuum expansion in plastic form	+ 0,4 vol. %
	Pour height	10-150 mm
	Water consumption	approx.: 3,9 - 4,5 l/30 kg or. 0,13 - 0,15 l/kg
	Flexural strength	with 3,9 l of water /30 kg - after 1 day >= 6,0 MPa; 7 days >= 7,0 MPa; 28 days: 9,0 MPa
		with 4,5 l of water /30 kg - after 1 day >= 5,0 MPa; 7 days >= 6,0 MPa; 28 days: 8,0 MPa
	Compressive strength	with 3,9 l of water /30 kg - after 1 day >= 35,0 MPa; 7 days >= 60,0 MPa; 28 days: 70,0 MPa
		with 4,5 l of water /30 kg - after 1 day >= 25,0 MPa; 7 days >= 50,0 MPa; 28 days: 65,0 MPa

CHARACTESISTIC OF HARDENED MORTAR:

Test / Properties	Method	Demand/Norm	Declaired value
Modul of elasticity	EN 13412:2006	≥ 20 GPa for class R4 accor. EN 1504-3	≥ 24,0 GPa
Bond strenght	EN 1542:2000	≥ 2,0 MPa for class R4 accor. EN 1504-3	≥ 2,5 MPa
Blocked shrinkage / expansion	EN 12617-4:2002	≥ 2,0 MPa for class R4 accor. EN 1504-3	≥ 3,0 MPa
Resistance to extracion	EN 1504-6:2006	≤ 0,6 mm af force 75 kN accor. EN 1504-6	≤ 0,4 mm at force 80,6 kN
Resistance to carbonation	EN 13295:2004	d_k ≤ reference concrete (MC(0,45))	d_k ≤ reference concrete (MC(0,45))
Adhesion after thermal compatibility - 50 cycles. Thermal cycling with de-icing salt impact	EN 13057:2002	≥ 2,0 MPa for class R4 accor. EN 1504-3	≥ 2,50 MPa

INSTRUCTIONS FOR USE

CONSUMPTION	approx. 2 kg for filling a 1 dm^3
BASE PREPARATION	Before pouring the ISOTAL compound, an adequate opening for pouring and opening for de-aeration has to be assured. Remove all free particles, dust, oil spots, dirt, coatings residue and everything that could reduce adherence to the concrete surface. On very smooth concrete surfaces grinding or sand-blasting is recommended in order to get sufficiently rough and adherent concrete surface. All surfaces to contact the grouting compound ISOTAL have to be moistened with water. The standing water has to be removed from openings by vacuuming of blowing out with compressed air. With very absorbent surfaces it is recommended to use KEMAPOX LINK as a bonding bridge, diluted with water in ration 1:1. Application is also possible on dry bonding bridge; KEMAPOX LINK has to be diluted with water in ratio 1:1 and then completely covered with Quartz Sand (B80S). The next day excess Sand has to be removed and the surface has to be vacuum cleaned.
MIX RATIO	Approx.: 3,9 - 4,5 l of water per 30 kg of dry mixture
MIX TIME	¾ of the water is poured into the mixer. While pouring the dry mixture into the water, mix continually until it is homogenous. The rest of the water is added according to the desired consistency (depending on the air temperature). Mixing should take 3-5 minutes, depends on intensity. Mix longer if necessary.
MIX TOOL	The grounding compound ISOTAL is mixed in mixer.
INSTALLATION	ISOTAL is poured on the prepared surface right after it has been mixed. Pour it into openings from one side only in order not to catch any air bubbles into the compound. Up to max. 30% of crushed Sand – grain size 4-8mm may be added, when the thickness is higher than 150 mm. In this case we, workability and final properties of the mortar should be checked before installation. EXAMPLE: In grouting mortar ISOTAL 30 kg bag we can be added 6 kg of crushed Sand (20 %). Dosage of water has to be tested with trial mixture. NOTE: Grouting can be done in one layer up to max. 30 cm.
CLEANING OF TOOL	Clean the tools immediately after use. Dry compound can be removed only mechanically
USAGE TIME	approx. 45 minutes

LIMITATIONS

BASE TEMPERATURE	+5°C min./ +30°C max.
AIR TEMPERATURE	+5°C min./ +30°C max.
MATERIAL TEMPERATURE	+5°C min./ +30°C max.
WARNINGS	• Times specified in the technical sheet were measured at the temperature of 23°C and relative air humidity of 50%. With higher temperatures prescribed time can be shortened while prolonged at lower temperatures. • Protect freshly installed material from freezing, rain and other weather conditions. The material should not be used at (surface, air, material) temperatures lower than 5°C.

Recommendation: Remains of the unhardened/unset material must be disposed in accordance to the local legislation.

Data source: All technical data in this technical sheet was obtained by laboratory research. Actual data may differ due to different working conditions.

Local restrictions: Due to specific local regulations the installed product can differ from country to country. For exact instructions a country technical sheet should be obtained.

PROOFS

NORMS/ STANDARDS	EN 1504-3; EN 1504-6

SAFETY DATA

Irritating. Contains cement. Irritating to eyes, skin and respiratory tract. Contact with skin may cause hypersensitivity. In case of eye contact thoroughly with water at once and consult a doctor. In case of skin contact flood with a lot of water. Keep away from the reach of children. More data on storage, handling and use of mixture can be found in the safety sheet which contains safety, toxicological and ecological data. Warnings on the original packaging should also be considered.

LEGAL BASE

Information and recommendations related to use of KEMA products are presented in good faith and believed to be correct. The later is based on our knowledge and experience with the products. Information is supplied upon the condition that products are stored and used according to the recommendations and the persons receiving the same will make their own determination as to its suitability for their purposes prior to use. No representations or warranties, either expressed or implied, of merchantability, fitness for a particular purpose or of any other nature are made hereunder with respect to Information or the product to which information refers. In no event will KEMA be responsible for damages of any nature whatsoever resulting from the use of or reliance upon Information or the product to which Information refers. Nothing contained herein is to be construed as a recommendation to the use any product, process, equipment or formulation in conflict with any patent, and KEMA makes no representation or warranty, expressed or implied that the use thereof will not infringe any patent. All orders fall under current sales and supply conditions. The user should always check the latest technical sheet available upon demand.