

PRODUCT DATA SHEET

KingAnchor

HIGH PERFORMANCE AND NON-SHRINK GROUT MATERIAL FOR ANCHORING APPLICATIONS

PRODUCT DESCRIPTION

KingAnchor is a prepackaged, non-shrink, non-metallic, and cementitious grout material for anchoring applications with a unique two-stage shrinkage compensating mechanism. With a special blend of shrinkage-reducing and plasticizing/water-reducing agents, this product compensates for shrinkage in both the plastic and hardened states.

USES

- For most grouted anchor requirements including cable bolting, earth tie-backs for excavation or soil stabilization, grouting anchors in tunnel support systems, re-bar grouting, and grouting soil or rock tendons for anchoring piles or foundation structures
- To grout and fill or repair voids in concrete
- Grouting tight clearances

PRODUCT INFORMATION

| | |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Packaging | 55 lb bag (25 kg) |
| Shelf Life | 12 months in original, unopened packaging |
| Storage Conditions | Store in a dry, covered area, protected from the elements For optimum performance it is recommended to store the material between 40°F - 95°F (5°C - 35°C) Protect from moisture, discard material if damp |

CHARACTERISTICS / ADVANTAGES

- Excellent pumpability
- Excellent cohesion and plastic stability
- Thixotropic properties reduce material loss in fractured ground
- Does not contain aluminum powder nor any components which generate hydrogen gas, carbon dioxide, or oxygen.
- Enhanced with un-densified silica fume for low permeability.
- Non-metallic, will not stain or rust.
- Bleed resistant, even at high flow.
- Non-shrink
- Low heat build-up.
- Non-corrosive.

TECHNICAL INFORMATION

| | | | |
|------------------------------------|----------------------------------|----------------------|-------------------|
| Compressive Strength | | | ASTM C109 |
| | 1 day | 2,000 psi (13.8 MPa) | |
| | 3 days | 5,000 psi (34.5 MPa) | |
| | 7 days | 7,000 psi (48.3 MPa) | |
| | 28 days | 8,000 psi (55.2 MPa) | |
| Shrinkage | | | ASTM C1090 |
| | 1 day | 0.0 % | |
| | 28 days | 0.0 % +0.2% | |
| Expansion | | | ASTM C940 |
| | 3 hours | 0.0 to +2.0 % | |
| Electrical Resistivity | | | ASTM C1202 |
| | 28 days | < 10,000 ohm-cm | |
| Rapid Chloride Permeability | < 2,500 Coulombs | | ASTM C1202 |
| Corrosion Test | Time to corrosion control | | |
| | 344 hrs | | |
| Bleeding | | | ASTM C1940 |
| | 4 hrs | 0.0% | |

APPLICATION INFORMATION

| | | | |
|--------------------------------|----------------------------------------------------------------------------------------------|-------------|------------------|
| Fresh mortar density | 125 lb/ft ³ | | ASTM C138 |
| Coverage | 0.53 ft ³ (0.015 m ³) per 55 lb bag | | |
| | Coverage figures do not include allowance for surface profile and porosity or material waste | | |
| Layer Thickness | Min. 1/8 " (3 mm) | | |
| Flowability | | | ASTM C939 |
| | After mixing | 15-30 sec | |
| | After 30 min | 15-30 sec | |
| Product Temperature | 65 °F - 75 °F (18 °C - 24 °C) | | |
| Ambient Air Temperature | 40 °F - 100 °F (4 °C - 38 °C) | | |
| Mixing Ratio | 12.75–13.75 pts (6–6.5 L) of water per 55 lb bag (25 kg) | | |
| | Do not exceed 13.75 pts of water | | |
| Substrate Temperature | 40 °F - 100 °F (4 °C - 38 °C) | | |
| Pot Life | Materials must be placed within 60 min of mixing | | |
| Set Time | | | ASTM C266 |
| | Initial Set | 3 -12 hours | |

BASIS OF PRODUCT DATA

Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions and curing conditions.

USES

- Do not use as a patching or overlay mortar or in unconfined areas.
- As with all cement based materials, avoid contact with aluminum to prevent adverse chemical reaction and possible product failure. Insulate potential areas of contact by coating aluminum bars, rails, posts etc. with an appropriate epoxy such as Sikadur® 32 Hi-Mod.
- Do not use in post tensioning applications.

ENVIRONMENTAL, HEALTH AND SAFETY

For further information and advice regarding transportation, handling, storage and disposal of chemical products, user should refer to the actual Safety Data Sheets containing physical, environmental, toxicological and other safety related data. User must read the current actual Safety Data Sheets before using any products. In case of an emergency, call CHEMTREC at 1-800-424-9300, International 703-527-3887.

APPLICATION INSTRUCTIONS

SURFACE PREPARATION

- Remove all deteriorated concrete, dirt, oil, grease, and other bond-inhibiting materials from the area to be repaired leaving a clean surface.
- To ensure optimum repair results, the effectiveness of decontamination and preparation should be assessed by a pull-off test.
- Substrate should be Saturated Surface Dry (SSD) with clean water prior to application. No standing water should remain during application.
- Ensure any forms will retain grout without leakage.

MIXING

- Start by using 12.75 pints (6 L) of water at approximately 70°F (If higher, use cold water; if colder, use warm water.) per 55 lb bag (25 kg) in a clean and appropriate mixing vessel.
- Add bag of material to mixing vessel. Mix for minimum of 3 minutes after the addition of the last bag or until a homogeneous mix is achieved.
- Continue to agitate material in the holding hopper to achieve best flow.
- Only add additional water as needed up to a total maximum of 13.75 pints (6.5 L) (DO NOT EXCEED) per 55 lb bag (25 kg) in order to achieve the flow specified on the Product Data Sheet (PDS).

- At higher temperatures and/or water amounts near upper range of maximum 13.75 pints (6.5 L), the grout will be less thixotropic. Therefore, it may be more appropriate to measure the flow using the standard flow cone test (ASTM C-939).
- Alternatively, for quantities less than a 55 lb bag (25 kg), mechanically mix with high-speed drill (2,500 rpm) for a minimum of 6 minutes.
- Method of mixing may significantly affect the material properties, particularly flow.
- Project specific testing by the engineer is recommended to ensure that the mixing and placement methods result in the specified requirements

APPLICATION

- Make sure all forming, mixing, placing, and clean-up materials are on hand.
- A preliminary trial should be completed on-site and inspected by the engineer to ensure that the placement means and methods yield the specified results

OPTIMUM PERFORMANCE

- Product should not be applied when ambient and substrate are below 40 °F (5 °C) or above 100 °F (38 °C).
- Product should not be applied if product temperature is below 65 °F (18 °C) or above 75 °F (24 °C), or if product is contaminated with moisture.
- Use of a colloidal mixer similar to ChemGrout® CG-600 series or other type of high shear mixer at approximately 1,800 rpm.

Contact your Sika STM Technical Representative for more information.

OTHER RESTRICTIONS

See Legal Disclaimer.

LEGAL DISCLAIMER

- KEEP CONTAINER TIGHTLY CLOSED
- KEEP OUT OF REACH OF CHILDREN
- NOT FOR INTERNAL CONSUMPTION
- FOR INDUSTRIAL USE ONLY
- FOR PROFESSIONAL USE ONLY

Prior to each use of any product of Sika Corporation, its subsidiaries or affiliates ("SIKA"), the user must always read and follow the warnings and instructions on the product's most current product label, Product Data Sheet and Safety Data Sheet which are available at usa.sika.com or by calling SIKA's Technical Service Department at 1-800-933-7452. Nothing contained in any SIKA literature or materials relieves the user of the obligation to read and follow the warnings and instructions for each SIKA product as set forth in the current product label, Product Data Sheet and Safety Data Sheet prior to use of the SIKA product.

SIKA warrants this product for one year from date of installation to be free from manufacturing defects and to meet the technical properties on the current Product Data Sheet if used as directed within the product's shelf life. User determines suitability of product for intended use and assumes all risks. User's and/or buyer's sole remedy shall be limited to the purchase price or replacement of this product exclusive of any labor costs. **NO OTHER WARRANTIES EXPRESS OR IMPLIED SHALL APPLY INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SIKA SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES. SIKA SHALL NOT BE RESPONSIBLE FOR THE USE OF THIS PRODUCT IN A MANNER TO INFRINGE ON ANY PATENT OR ANY OTHER INTELLECTUAL PROPERTY RIGHTS HELD BY OTHERS.**

Sale of SIKA products are subject to the Terms and Conditions of Sale which are available at <https://usa.sika.com/en/group/SikaCorp/termsandconditions.html> or by calling 1-800-933-7452.

Sika Corporation

201 Polito Avenue
Lyndhurst, NJ 07071
Phone: +1-800-933-7452
Fax: +1-201-933-6225
usa.sika.com



Product Data Sheet

KingAnchor
April 2024, Version 01.05
020201010030000167

KingAnchor-en-US-(04-2024)-1-5.pdf

