BUILDING TRUST

PRODUCT DATA SHEET

SikaGrout®-110 AN

(formerly MFlow 110AN)

RAPID-SETTING GROUT AND ANCHORING CEMENT FOR CONCRETE AND MASONRY

PRODUCT DESCRIPTION

SikaGrout®-110 AN is designed for a variety of grouting and anchoring applications where high initial strengths are useful, including the anchoring of railings, bolts, and posts as well as the grouting of machinery and equipment bases.

USES

- Railings
- Anchor bolts
- Posts
- Normal loads for columns and baseplates
- Structural columns
- Seating bolts
- Reinforcing rods
- Power line stanchions

Substrates

- Concrete
- Masonry

CHARACTERISTICS / ADVANTAGES

- Only requires the addition of potable water
- Pourable
- Fast setting
- Hardens free of bleeding when properly placed and yields a high effective bearing area for proper support and load transfer
- Shrinkage compensated and thus reduces stress at the bondline

APPROVALS / STANDARDS

- ASTM C 1107, Class B
- CRD-C-621

As modified for rapid-setting grout

PRODUCT INFORMATION

Chemical Base	SikaGrout®-110 AN is composed of Portland cement and silicon dioxide (quartz).
Packaging	50 lb (22.6 kg) pails
Shelf Life	1 year when properly stored
Storage Conditions	Store in unopened containers in cool, clean, dry conditions

TECHNICAL INFORMATION

Compressive Strength	1,500psi (10.3MPa) at 1 hour 6,500psi (44.8MPa) at 7 days 8,000psi (55.2MPa) at 28 days	(ASTM C 109)
Pull-Out Resistance	> 5,000 lbs at one hour	

APPLICATION INFORMATION

Coverage	0.40 ft³ (0.011 m³) per 50 lb (22.6 kg) pail 0.60 ft³ (0.017 m³) per 50 lb (22.6 kg) pail when extended with 50 lbs (22.6 kg) of aggregate.

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.

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

NOTES ON INSTALLATION

- Do not use below 40 °F (4 °C) or over 90 °F (32 °C).
- Do not use in pours with less than 1/4" (6 mm) clearance.
- If SikaGrout®-110 AN is extended with aggregate, the minimum depth of placement is then 1/2" (13 mm).
- The depth of the anchoring system must be determined in relation to the height and loading of its member. Contact Sika Technical Service for further information.
- The beveling of grout shoulders will reduce cracking.
- Do not add plasticizers, accelerators, retarders, or other additives
- Where precision alignment and severe service, such as heavy loading, rolling, or impact resistance are required, use metallic reinforced, non-catalyzed SikaGrout®-885 MF. If the amount of impact resistance needed is not great enough to require metallic reinforcement, use natural aggregate, SikaGrout®-928.
- Use SikaGrout®-816, SikaGrout®-1205, or SikaGrout®-1206 post-tensioning cable grouts when the grout will be in contact with steel stressed over 80,000 psi (550 MPa).
- Make certain the most current versions of the product data sheet and SDS are being used.
- Proper application is the responsibility of the user.

Field visits by Sika personnel are for the purpose of making technical recommendations only and not for supervising or providing quality control on the jobsite.

SURFACE PREPARATION

Anchoring

1. In sound fully cured concrete, drill holes wide enough to accept the anchor bolts (clearance not less than 1/4" [6 mm]). Make certain the hole diameter will allow the material to readily flow between the anchor bolt and the wall of the cavity. Typically, the diameter of the hole should be a minimum of 3 times the diameter of the post.
2. For added strength, undercut the base of the hole by tilting the drill and working it back and forth.
3. Blow or vacuum out all loose material to ensure a clean, dust-free surface.
4. Before application, dampen the cavity to a saturated surface-dry (SSD) condition, but do not allow water to pond in the bottom of the hole.

Baseplate Grouting

1. Steel surfaces must be free of dirt, oil, grease, or other contaminants.
2. The surface to be grouted must be clean, SSD, strong, and roughened to a CSP of 5–9 following ICRI Guideline 310.2 to permit proper bond.
3. When dynamic, shear, or tensile forces are anticipated, concrete surfaces should be chipped with a “chisel-point” hammer, to a roughness of (plus or minus) 3/8” (10 mm). Verify the absence of bruising following ICRI Guideline 210.3.
4. Concrete surfaces should be saturated (ponded) with clean water for 24 hours just before grouting.
5. All freestanding water must be removed from the foundation and bolt holes immediately before grouting.
6. Anchor bolt holes must be grouted and sufficiently set before the major portion of the grout is placed.
7. Shade the foundation from sunlight 24 hours before and 24 hours after grouting.

Forming Baseplate Grouting

1. Forms should be liquid-tight and nonabsorbent. Seal forms with putty, sealant, caulk, or polyurethane foam.
2. Moderately sized equipment should utilize a head form sloped at 45 degrees to enhance the grout placement. A moveable head box may provide additional head at minimum cost.

3. Side and end forms should be a minimum of 1" (25 mm) distance horizontally from the object grouted to permit expulsion of air and any remaining saturation water as the grout is placed.
4. Leave a minimum of 2" between the bearing plate and the form to allow for ease of placement.
5. Use sufficient bracing to prevent the grout from leaking or moving.
6. Eliminate large, non-supported grout areas wherever possible.
7. Extend forms a minimum of 1" (25 mm) higher than the bottom of the equipment being grouted.
8. Expansion joints may be necessary for both indoor and outdoor installation. Consult your local Sika field representative for suggestions and recommendations.

MIXING

1. Precondition SikaGrout®-110 AN to 70 °F ±5° (21 °C ±3°) before mixing.
2. SikaGrout®-110 AN requires only the addition of potable water to achieve the desired placement consistency. Use the minimum amount of mixing water to achieve the necessary pourable placement consistency, approximately 2.3 fl oz/1 lb (71.2 ml/ 0.45 kg)
3. For best results for small installations, mix mechanically at a slow speed with a 3/4" drill and paddle mixer. For larger batches, a forced-action mortar mixer is recommended. Mix no longer than 3 minutes to achieve a uniform, lump-free consistency.
4. Placement time is 10–12 minutes at 70 °F (21 °C) and 50% relative humidity.

APPLICATION

Anchoring

1. Place the anchor bolts.
2. Pour a small amount of the mixed SikaGrout®-110 AN into the hole and work the bolt up and down to eliminate air pockets.
3. Fill the rest of the hole level with the surrounding concrete or slightly overfill to prevent ponding of water. Pour from one side only to ensure a good, even flow.
4. SikaGrout®-110 AN will set hard in 15 minutes, but extreme temperatures will lengthen or shorten set times. Do not attach nuts for 90 minutes. SikaGrout®-110 AN strengthens as it cures, so allow more time when installing heavy equipment.
5. Follow ACI 305 and 306 for hot or cold weather guidelines.

Baseplate Grouting

1. Place SikaGrout®-110 AN in a continuous pour. Discard grout that becomes unworkable. Place grout from one side to avoid entrapment of air. Make sure that the grout fills the entire space being grouted and remains in contact with the plate throughout the grouting process. Straps may be used to move the grout to ensure the entire space is filled. DO NOT VIBRATE.
2. Immediately after placement, trim the surfaces with a trowel and cover the exposed grout with clean wet rags (not burlap). Maintain moisture for 5–6 hours.
3. The grout should offer stiff resistance to penetration with a pointed mason's trowel before the grout forms are removed or excessive grout is cut back. Technical Data Composition SikaGrout®-110 AN is composed of Portland cement and silicon dioxide (quartz).
4. To further minimize the potential moisture loss within the grout, cure all exposed grout with an approved membrane curing compound (compliant with ASTM C 309 or preferably ASTM C 1315) immediately after the wet rags are removed.
5. For placements greater than 2" (51 mm)in depth, the product should be extended with aggregate. The aggregate extension is dependent on the grout type, placement, and application requirements, and is typically required for placement depths beyond the limitation of the neat material. The aggregate should be washed, graded, saturated, surface-dry(SSD), high-density, free from deleterious materials, and comply with the requirements of ASTM C 33. Consult Sika Technical Service for additional guidance.
6. Follow ACI 305 and 306 for hot or cold weather guidelines.

CURING TREATMENT

Cure all exposed grout shoulders by wet curing for 24 hours and by applying a curing compound compliant with ASTM C 309 or preferably ASTM C 1315.

CLEANING OF TOOLS

Clean tools and equipment with clean water immediately after use. Cured material must be removed mechanically.

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

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