BUILDING TRUST
CONSTRUIRE LA CONFIANCE

PRODUCT DATA SHEET
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NON-METALLIC, NON-SHRINK GROUTING

SikaGrout®-212 SR

NON-SHRINK, SULPHATE RESISTANT, CEMENTITIOUS GROUT

Description

SikaGrout®-212 SR is a non-shrink, sulphate resistant cementitious grout with a unique two-stage shrinkage compensating mechanism, compensating for shrinkage in both the plastic and the hardened states. It is non-metallic, contains no chlorides and may be placed at various consistencies ranging from dry pack to fluid by simply adjusting the quantity of mixing water.

Where to Use

- On grade, above and below grade, interior and exterior applications where contact with sulphates is anticipated.
- Structural grouting of column base plates, machine base plates, anchor bolts, bearing plates, bridge seats, precast wall panels.

Advantages

- Pre-blended for easy application and maximum field control. Just add water, mix and place.
- Versatile, can be applied in any consistency from dry pack to fluid.
- Non-corrosive does not contain chlorides.
- Formulated with inert, non-reactive aggregates to eliminate potential Alkali-Aggregate Reactivity (AAR).
- Excellent pumpability - does not segregate even at high flow; no build-up on equipment hopper.
- Low heat development.
- Superior freeze/thaw resistance.
- Meets requirements of CAN/CSA-A23.1-04 for very severe sulphate exposure (Class S-1).
- Product recognized by the British Columbia Ministry of Transportation (BC MoT).

Technical Data

Packaging	25 kg (55 lb) bag	
Colour	Concrete Grey	
Yield	Approx. 13 L (0.46 ft³) per bag of fluid grout	
Shelf Life	12 months in original, unopened packaging. Store dry, ensuring that product is not exposed to rain, condensation or high humidity. For best results, condition product at 18 to 29 °C (65 to 84 °F) before using.	
Mix Ratio	4.3 L (1.14 US gal.) water/bag max.	

Properties at 23 °C (73 °F) and 50 % R.H.

SikaGrout®-212 SR (tested at w/c ratio of 0.40)

Aggregate grading ASTM C136	100 % passing 2.5 mm (3/32 in)	
Flow cone CAN/CSA A23.2-1B	30 - 50 sec	
Set time ASTM C 403	Initial	4 hrs 30 min
	Final	7 hrs 30 min

Compressive Strength, MPa (psi) **CAN/CSA A23.2-1B***	**SikaGrout®-212 SR**** W/C = 0.40 [4.3 L (1.14 US gal.)/bag]
1 day	22 (3190)
3 days	50 (7255)
7 days	57 (8270)
28 days	60 (8705)

* Fluid consistency compressive strengths are given as minimum guidelines. Pourable and dry pack consistencies will easily exceed these values. All moulds, mixing tools and powder components were pre-conditioned to the test temperatures. Prepared test specimens were cast and then cured at the indicated test temperatures until the time of testing. Lid should be clamped on mold at all time.

** Meets guidelines for very severe sulphate exposure.

Product properties are typically averages, obtained under laboratory conditions. Reasonable variations can be expected on-site due to local factors, including environment, preparation, application, curing and test methods.

HOW TO USE

Surface Preparation

All grease, oil laitance, ice or snow and foreign deposits shall be removed from all surfaces with which the grout will come in contact. The concrete foundation shall be roughened to the extent that it does not present a smooth surface, which would impede the bond of the grout to the foundation. All dust and loose particles shall be removed by sandblasting, high pressure waterblasting or other suitable means.

Concrete foundations less than 28 days old shall be kept wet for at least 12 hours, and older foundations for a minimum of 24 hours before placing grout (SSD condition). All free-standing water shall be removed from concrete surfaces prior to grouting.

All items to be grouted into place shall be properly positioned and anchored prior to grouting except for anchor bolts and dowels, which may be placed into the fresh grout if job conditions permit and at the discretion of the engineer in charge. For grouting of base plates the formwork used to contain the grout shall be constructed in a workmanlike manner and caulked to prevent leakage of grout. Provisions shall be made at the high points for air to be vented as it is displaced by grout.

Mixing

Mix using a heavy duty low-speed drill (300 - 450 rpm) and mixing paddle or in a grout mixer. The size of the mixer should be appropriate to the volume of grout required. Use a minimum amount of water consistent with placeability requirements. After all dry product has been added to the water, continue mixing for three (3) minutes. For application greater than 150 mm (6 in) in thickness, add up to 12 kg (26.5 lb) of 10 mm (3/8 in) coarse aggregate. The aggregate must be non-reactive (reference ASTM C1260, C227, and C289), clean, well graded, saturated surface dry, have low absorption, high density and comply with ASTM C33, size number 8 per table 2.

Application

The prepared grout may be pumped or transported to the forms in buckets or wheelbarrows and deposited without delay. External vibration and agitation of the grout in the forms is permitted. Grout having been prepared but not placed within 1 hour after preparation shall be discarded. Prepared grout shall be agitated until use. Several hours after placement of grout (depending on ambient temperatures) forms may be removed and exposed grout shoulders may be trimmed or shaped to desired finish.

Dry pack application: Refer to the Sika Cementitious Grouting Method Statement.

Curing

As per ACI 308 recommendations for cement concrete, curing is required. To achieve performance consistent with Technical Data, curing must be provided by recognized curing methods, such as wet burlap covered with white polyethylene film, misting with water, or approved water-based curing compound, such as Sika® Florseal WB-18 & -25. Curing must commence immediately after placing and finishing. Protect freshly applied grout from direct sunlight, wind rain and frost.

Clean Up

Clean all tools and equipment immediately after use with water. Once hardened, material can only be removed manually or mechanically. Wash soiled hands and skin thoroughly in hot soapy water or use Sika® Hand Cleaner towels.

Limitations

- Important: protect stored material from exposure to rain, condensation and high humidity as moisture may penetrate packaging, causing lumps.
- For best results, condition product to 18 to 29 °C (65 to 84 °F) prior to mixing and installation. Lower temperatures may result in slower strength development and longer cure times.
- Maintain wet grout, ambient and substrate temperatures between 5 and 32 °C (41 and 89 °F) for a period of 72 hours after placing.
- SikaGrout®-212 SR must be protected from freezing during setting.
- Minimum application thickness (neat without additional aggregate): 25 mm (1 in).
- Maximum application thickness (neat without additional aggregate): 150 mm (6 in). Thicker applications are possible with the addition of suitable aggregate. Please contact Sika Canada Technical Services.
- For anchor bolt/dowel grouting, hole diameter should be 25 mm (1 in) greater than bar diameter.
- Anchor bolt/bar holes should be pre-dampened for a period of 1 hour prior to grouting. Holes must be in saturated surface dry (SSD) condition at time of grouting.
- Do not use as a patching or overlay mortar or in unconfined areas.
- Use only potable water.
- Extending with aggregates will reduce compressive and flexural strengths. Dimensions and grading of aggregates will influence effect on physical properties; pre-testing is recommended.

Health and Safety Information

For information and advice on the safe handling, storage and disposal of chemical products, users should refer to the most recent SAFETY DATA SHEET containing physical, ecological, toxicological and other safety-related data.

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FOR INDUSTRIAL USE ONLY

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