BUILDING TRUST
CONSTRUIRE LA CONFIANCE

PRODUCT DATA SHEET
Edition 08.2020/v1
CSC Master Format™ 03 62 13
NON-METALLIC, NON-SHRINK GROUTING

SikaGrout®-112

ALL PURPOSE, NON-SHRINK AND NON-METALLIC, CEMENTITIOUS GROUT

Description

SikaGrout®-112 is a pre-packaged, pumpable, non-shrink, non-metallic, cementitious grout containing well-graded, natural, fine aggregate, silica fume and other carefully selected components. It can be used at varying consistencies, from dry pack to flowable.

Where to Use

- General construcion applications.
- Grouting column base plates.
- Grouting anchor bolts, dowels and hand rails.
- Grouting under precast, cast-in-place concrete members.

Advantages

- Low cost.
- Ideal for void filling.
- Can be mixed and placed from dry pack, plastic and flowable consistencies using relatively low water demand.
- Excellent pumpability.
- Improved resistance to water wash-out.
- Non-corrosive, non-chloride, non-metallic.
- Good resistance to freeze-thaw cycling and salt-scaling in the presence of de-icing salts.

Approvals / Certifications

- Ministère des Transports du Québec (MTQ) Approved.
- Ministry of Transportation of Ontario (MTO) Approved.
- Ongoing qualification by The Road Authority (TRA).
- Meets ASTM C1107 for Grade C type grouts.

Technical Data

Packaging	25 kg (55 lb) bag	
Colour	Concrete Grey	
Yield	Approx. 13.6 L (0.48 ft³) per bag of flowable 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 to temperatures between 18 and 29 °C (65 and 84 °F) before using.	
Mix Ratio	**Dry pack**	2.3 L (0.61 US gal.) water per bag
	Plastic	3.1 L (0.82 US gal.) water per bag
	Flowable	4.0 L (1.0 US gal.) water per bag

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

	Dry pack	**Plastic**	**Flowable**
Wet Density ASTM C138		2170 kg/m³ (135 lb/ft³)	2155 kg/m³ (134 lb/ft³)
Flow ASTM C1437		110 %	> 150 %
Volume of Water per 25 Kg (55 lb)	2.3 L (0.61 US gal.)	3.1 L (0.82 US gal.)	4.0 L (1.0 US gal.)
Working Time	30 minutes	60 minutes	60 minutes
Set Time ASTM C191 (Method A)			
Initial		2 - 4 h	5 - 8 h
Final		2 - 5 h	7 - 10 h
Compressive Strength ASTM C109, MPA (psi)			
1 day		25 (3625)	21 (3000)
3 days	50 (7250)	30 (4350)	25 (3625)
7 days	55 (8000)	45 (6500)	40 (5800)
28 days	70 (10150)	55 (8000)	50 (7250)
Bond Strength By Slant Shear ASTM C882, MPA (psi)			
28 days		14.0 (2030)	13.6 (1970)
Modulus of Elasticity ASTM C469, GPa (psi)			
28 days		27.5 (4.0 x 10⁶)	22.5 (3.25 x 10⁶)
Hardened Height Change ASTM C1090			
28 days		0.03 %	0.06 %
Absorption ASTM C642			
28 day		8.2 %	13.0 %
Freeze-thaw Resistance ASTM C666		105 %	108 %
28 days		(Excellent durability factor)	
Salt-scaling Resistance ASTM C672			
25 Cycles		0.01 kg/m² (0.002 lb/ft²)	0.04 kg/m² (0.008 lb/ft²)
50 Cycles		0.09 kg/m² (0.02 lb/ft²)	0.20 kg/m² (0.04 lb/ft²)

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 any 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.

Application

Flowable consistency – SikaGrout®-112 may be poured or pumped into place. Pour continuously with adequate head pressure or pump into place ensuring that all voids are completely filled. Formwork joints should be caulked with suitable material. Adequately vent high points to allow entrapped air to escape.

Plastic consistency – Rod into place or trowel into areas where material cannot flow into place. Grout consistency should be similar to that of a masonry mortar (between 100 % and 115 % flow, ASTM C1437).

Dry Pack consistency – Firmly press or ram the grout into place using metal or hardwood tamping tools and a mason's trowel. Grout consistency when pressed into a firm ball should display no cracking or excessive surface moisture.
For additional information 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. Usage of Sika® Ultracure DOT™ or NCF™ wet curing blankets is also strongly recommended. 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

- Protect stored material from exposure to rain, condensation and high humidity as moisture may penetrate packaging, causing lumps.
- For best results, condition product to temperatures ranging from 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 - 32 °C (41 - 89 °F) for a period of 72 hours after placing.
- SikaGrout®-112 must be protected from freezing during setting.
- Minimum application thickness : 25 mm (1 in).
- Maximum application thickness : 102 mm (4 in).
- For void filling operations larger than 102 mm (4 in) use another SikaGrout® product or a self-compacting concrete from the Sikacrete® range.
- Not recommended for areas of extremely high vibration.
- 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 one (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.

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.

KEEP OUT OF REACH OF CHILDREN
FOR INDUSTRIAL USE ONLY

The Information, and in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions, within their shelflife. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any recommendations, or from any other advice offered. The information contained herein does not relieve the user of the products from testing them for the intended application and purpose. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request or may be downloaded from our website at: www.sika.ca

SIKA CANADA INC.
Head Office
601, avenue Delmar
Pointe-Claire, Quebec
H9R 4A9

Other locations
Toronto
Edmonton
Vancouver

1-800-933-SIKA
www.sika.ca

Certified ISO 9001 (CERT-0102780)
Certified ISO 14001 (CERT-0102791)

BUILDING TRUST
CONSTRUIRE LA CONFIANCE