

## PRODUCT DATA SHEET

# SikaGrout<sup>®</sup>-212

General Purpose cementitious grout

### PRODUCT DESCRIPTION

SikaGrout<sup>®</sup>-212 is a one-component, ready to mix, free flowing, non-shrink, cementitious grout with a unique 2-stage shrinkage compensating mechanism.

### USES

- General purpose grouting
- Machine and column base plates
- Anchor rods, bearing plates
- Ram in place as a dry pack
- Trowel-apply as a medium flow
- Pour or pump as high flow
- Bedding joints in pre-cast concrete sections
- Filling cavities, voids, gaps and recesses
- On grade, above and below grade
- Indoors and out

### CHARACTERISTICS / ADVANTAGES

- Easy to use (ready to mix powder)
- Shrinkage compensated properties in both the plastic and hardened states
- Multiple fluidity with a single component
- Good bond to concrete
- Non-metallic, will not stain or rust
- Contains no chloride
- Blend of shrinkage-reducing and plasticizing/water-reducing agents
- Low heat build-up
- Excellent for pumping: does not segregate, even at high flow. No build-up on equipment hopper
- Superior freeze/thaw resistance
- Resistant to oil and water

### APPROVALS / STANDARDS

- Meets ASTM C-1107 (Grade C)
- Shows positive expansion when tested in accordance with ASTM C-827
- SikaGrout<sup>®</sup>-212 is USDA certifiable

### PRODUCT INFORMATION

<b>Chemical Base</b>	Cement, selected fillers and aggregates, special additives
<b>Packaging</b>	50 lb (22.7 kg) bag
<b>Appearance / Color</b>	Gray powder
<b>Shelf Life</b>	12 months from date of production if stored properly in original, unopened and undamaged sealed packaging
<b>Storage Conditions</b>	Store dry at 40–95 °F (4–35 °C) Protect from moisture. If damp, discard material

## TECHNICAL INFORMATION

<b>Compressive Strength</b>		<b>Plastic</b>	<b>Flowable</b>	<b>Fluid</b>	(ASTM C-942)
	1 day	4,500 psi (31 MPa)	3,500 psi (24.1 MPa)	2,700 psi (18.6 MPa)	73 °F (23 °C) 50 % R.H
	7 days	6,100 psi (42 MPa)	5,700 psi (39.3 MPa)	5,500 psi (37.9 MPa)	
	28 days	7,500 psi (51.7 MPa)	6,200 psi (42.7 MPa)	5,800 psi (40 MPa)	
<b>Flexural Strength</b>	28 days	1,400 psi (9.6 MPa)	1,200 psi (8.2 MPa)	1,000 psi (6.8 MPa)	(ASTM C-293) 73 °F (23 °C) 50 % R.H
<b>Splitting Tensile Strength</b>	28 days	600 psi (4.1 MPa)	575 psi (3.9 MPa)	500 psi (3.4 MPa)	(ASTM C-496) 73 °F (23 °C) 50 % R.H
<b>Tensile Adhesion Strength</b>	28 days	2,000 psi (13.7 MPa)	1,900 psi (13.1 MPa)	1,900 psi (13.1 MPa)	(ASTM C-882 modified) 73 °F (23 °C) 50 % R.H
<b>Expansion</b>	28 days	+0.021 %	+0.056 %	+0.027 %	(ASTM C-1090) 73 °F (23 °C) 50 % R.H.

## APPLICATION INFORMATION

<b>Mixing Ratio</b>	<b>Plastic</b>	<b>Flowable</b>	<b>Fluid</b>		
	6 pt	6.5 pt	8.5 pt		
<b>Coverage</b>	0.44 ft <sup>3</sup> (0.01 m <sup>3</sup> ) at fluid consistency (Coverage figures do not include allowance for surface profile and porosity or material waste)				
<b>Layer Thickness</b>	<b>Min.</b>	<b>Max.</b>			
	1/2" (12.7 mm)	4" (101.6 mm)			
	Thicker applications can be achieved. Contact Sika® Technical Services Department for further information.				
<b>Flowability</b>	<b>Plastic<sup>1</sup></b>	<b>Flowable<sup>1</sup></b>	<b>Fluid<sup>2</sup></b>	(ASTM C-1437 <sup>1</sup> ASTM C-939 <sup>2</sup> )	
	100–124 %	124–145 %	20–40 sec		
<b>Product Temperature</b>	65–75 °F (18–24 °C)				
<b>Ambient Air Temperature</b>	> 45 °F (7 °C)				
<b>Substrate Temperature</b>	> 45 °F (7 °C)				
<b>Pot Life</b>	~15 minutes As the temperature will affect the pot life, application temperature: <ul style="list-style-type: none"> <li>▪ Above 73 °F (23 °C) will reduce the pot life and flow</li> <li>▪ Below 73 °F (23 °C) will extend the pot life and flow</li> </ul>				
<b>Set Time</b>		<b>Plastic</b>	<b>Flowable</b>	<b>Fluid</b>	(ASTM C-266) 73 °F (23 °C) 50 % R.H
	Initial	3.5–4.5 h	4.0–5.0 h	4.5–6.5 h	
	Final	4.5–5.5 h	5.5–6.5 h	6.0–8.0 h	

# APPLICATION INSTRUCTIONS

## SURFACE PREPARATION

- Remove all dirt, oil, grease, and other bond-inhibiting materials by mechanical means.
- Anchor bolts to be grouted must be de-greased with suitable solvent.
- Concrete must be sound and roughened to a CSP 4 or higher to promote mechanical adhesion.
- Prior to pouring, surface should be brought to a Saturated Surface Dry (SSD) condition.
- Steel should be cleaned and prepared thoroughly by blastcleaning to a white metal finish.
- Follow standard industry and Sika® guidelines for use as an anchoring epoxy.
- Where grout-tight form is difficult to achieve, use SikaGrout®-212 in dry pack consistency.

## FORMING

- For pourable grout, construct forms to retain grout without leakage.
- Should be lined or coated with bond-breaker for easy removal.
- Should be sufficiently high to accommodate head of grout.

## MIXING

- Pour the water in the recommended proportion into a suitable mixing container.
- While mixing slowly, add the powder to the water.
- Mix thoroughly for 3 minutes with low speed (< 500 rpm) hand drill mixer to avoid entraining too much air and until homogenous with no lumps.

## EXTENSION WITH AGGREGATES

- For deeper applications (plastic and flowable consistency only), 25 lbs. of 3/8" (9.5 mm) coarse aggregate can be added.
- The aggregate must be non-reactive (reference ASTM C-1260, C-227 and C-289), clean, well graded, saturated surface dry, have low absorption and high density, and comply with ASTM C-33 size number 8 per Table 2.
- Variances in aggregate may result in different strengths.
- Add pea gravel after the water and SikaGrout®-212.

## APPLICATION

- Within 15 minutes after mixing, place grout into forms in normal manner to avoid air entrapment.
- Vibrate, pump, or ram grout as necessary to achieve flow or compaction. SikaGrout®-212 must be confined in either the horizontal or vertical direction leaving minimum exposed surface.
- SikaGrout®-212 is an excellent grout for pumping, even at high flow.
- For pump recommendations, contact Technical

Service.

- After grout has achieved final set, remove forms, trim or shape exposed grout shoulders to designed profile.

## CURING TREATMENT

Wet cure for a minimum of 3 days or apply a curing compound which complies with ASTM C-309 on exposed surfaces.

## CLEANING OF TOOLS

Clean all tools and application equipment with water immediately after use.

## LIMITATIONS

- Not to be used as an overlay in unconfined spaces
- Not to be used as a patch repair
- Avoid application in direct sun and/or strong wind
- Apply only to sound, prepared substrate
- Do not add additional water after application as this may cause cracking
- Protect freshly applied material from freezing and frost
- Keep exposed surfaces to a minimum
- 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® Hi-Mod 32.

## 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.

## OTHER RESTRICTIONS

See Legal Disclaimer.

## 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.

## DIRECTIVE 2004/42/CE - LIMITATION OF EMISSIONS OF VOC

0 g/L

(EPA Method 24)

## LEGAL DISCLAIMER

- KEEP CONTAINER TIGHTLY CLOSED

Product Data Sheet

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

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