SHOP DRAWING REVIEW FORM AND TRANSMITTAL

DATE: **November 02, 2021**

TO: Carl Hendrickson
Project Manager
Veolia Water
825 West Water Street
Taunton, MA 02780

FROM: Michael Andrus, P.E.
Project Manager
BETA Group, Inc.
701 George Washington Hwy
Lincoln, Rhode Island 02865

RE: City of Taunton, MA
WWTF Phase 1 Improvements
Contract S-2021-1

Shop Drawing No. 03604-001 – Non Shrink Grout

BETA COMMENTS:

Item	Action Code	Description/Comments
1	**1**	**Non Shrink Grout (Sika)** **1.** Acceptable as submitted.

Action Codes
1 - No Exception Taken
2 - Make Corrections Noted
3 - Amend and Resubmit
4 - Rejected, See Remarks

a. Installation shall proceed only when Action Code is '1' or '2'.
b. Submittals action coded '3' shall be resubmitted within time limit set in Contract.
c. Review does not relieve Contractor from responsibility of compliance with the Contract Documents.

Hart Engineering Corporation

SUBMITTAL: 03604-01

PROJECT: 9900. - Veolia/Taunton WWTF Phase 1 Improvements **DATE: 10/15/2021**

SUBMITTAL: 03604-01 - Non-Shrink Grout
REVISION: 0
STATUS: Eng
SPEC #: 03604

TO:
Michael Andrus
Beta Group Inc.
6 Blackstone Place
Lincoln, RI 02865
MAndrus@BETA-Inc.com

FROM:
Ryan Murphy
Hart Engineering Corporation
800 Scenic View Drive
Cumberland, RI 02864
rmurphy@hartcompanies.com

Item	Revision	Description	Status	Date Sent	Date Returned
03604-01	0	Non-Shrink Grout	Eng	10/15/2021	
Notes:					

SHOP DRAWING REVIEW

☑ 1 – Approved ☐ 2 – Approved as Noted

☐ 3 – Revise and Resubmit ☐ 4 - Rejected

☐ 5 – Record File Only – No Action Taken

(Above Check Designates Action Code – See Review Comments)

IMPORTANT NOTE FOR CONTRACTOR

Review is only for general compliance with the design concept and information provided in Contract Documents. Corrections and comments made on the Shop Drawings during review do not relieve the Contractor from compliance with the requirements of the plans and specifications. Review and/or approval of a specific item shall not include review or approval of an assembly of which the item is a component. No approval or correction of a Shop Drawing shall be construed as an order for extra work. The Contractor is responsible for: all quantities and dimensions to be confirmed and correlated; information that pertains solely to the fabrication processes or to the means, methods, techniques, sequences and procedures of construction; coordination of the Work with that of all trades and subcontractors; and performing all Work in a safe and satisfactory manner.

BETA GROUP, INC. Checked By: MLA

By: MLA Date: 11/2/21

Additional Notes:

Status Codes
1-APP – No Exceptions Taken
2-ANR – Make Corrections Noted
3-R&R – Revise and Resubmit
4-REJ – Rejected
5-IPO – For Information Purposes Only
6-NRR – Not Required for Review
ENG – Submitted to Engineer

Sincerely,
Hart Engineering Corporation

DATE: 10/15/2021

Jeremy Boulay
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Contractors Supply Inc.
3340 Pawtucket Ave
East Providence, RI
02915
United States

Project Name	Taunton WWTP - Phase I

Package Name	03 60 04, v01	Due Date	13 Oct 2021
Revision #	1	Need By Date	13 Oct 2021
Package type	For approval Full submittal		

03 60 04

#	Sub-section	Item Specified	Source or Mfr	Item Submitted	Notes
0007 -	2.01.A.	NON - SHRINK CONSTRUCTION GROUT view spec	Sika	**SikaGrout®-212** SikaGrout-212-Product-Data-1848350.PDF SikaGrout-212-SDS-1853469.pdf SikaGrout-212-Installation-Instructions-1323226.pdf	

Section:	03 60 04
#:	0007
Specified:	2.01.A., NON - SHRINK CONSTRUCTION GROUT
Reference:	view spec
Item submitted:	SikaGrout®-212

SikaGrout-212-Product-Data-1848350.PDF
SikaGrout-212-SDS-1853469.pdf
SikaGrout-212-Installation-Instructions-1323226.pdf

BUILDING TRUST

PRODUCT DATA SHEET

SikaGrout®-212

GENERAL PURPOSE CEMENTITIOUS GROUT

PRODUCT DESCRIPTION

SikaGrout®-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®-212 is USDA certifiable

PRODUCT INFORMATION

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

TECHNICAL INFORMATION

Compressive Strength		**Plastic**	**Flowable**	**Fluid**	(ASTM C-942) 73 °F (23 °C) 50 % R.H
	1 day	4,500 psi (31 MPa)	3,500 psi (24.1 MPa)	2,700 psi (18.6 MPa)	
	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)	
Flexural Strength	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
Splitting Tensile Strength	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
Tensile Adhesion Strength	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
Expansion	28 days	+0.021 %	+0.056 %	+0.027 %	(ASTM C-1090) 73 °F (23 °C) 50 % R.H.

APPLICATION INFORMATION

Mixing Ratio

Plastic	**Flowable**	**Fluid**
6 pt	6.5 pt	8.5 pt

Coverage

0.44 ft^3 (0.01 m^3) at fluid consistency

(Coverage figures do not include allowance for surface profile and porosity or material waste)

Layer Thickness

Min.	**Max.**
1/2" (12.7 mm)	4" (101.6 mm)

Thicker applications can be achieved. Contact Sika® Technical Services Department for further information.

Flowability

Plastic[1]	**Flowable**[1]	**Fluid**[2]	(ASTM C-1437[1] ASTM C-939[2])
100–124 %	124–145 %	20–40 sec	

Product Temperature

65–75 °F (18–24 °C)

Ambient Air Temperature

> 45 °F (7 °C)

Substrate Temperature

> 45 °F (7 °C)

Pot Life

~15 minutes

As the temperature will affect the pot life, application temperature:
- Above 73 °F (23 °C) will reduce the pot life and flow
- Below 73 °F (23 °C) will extend the pot life and flow

Set Time		**Plastic**	**Flowable**	**Fluid**	(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 consistancy 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**
- **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.

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SECTION 1. IDENTIFICATION

Product name	:	SikaGrout®-212
Company name	:	Sika Corporation 201 Polito Avenue Lyndhurst, NJ 07071 USA www.sikausa.com
Telephone	:	(201) 933-8800
Telefax	:	(201) 804-1076
E-mail address	:	ehs@sika-corp.com
Emergency telephone	:	CHEMTREC: 800-424-9300 INTERNATIONAL: 703-527-3887
Recommended use of the chemical and restrictions on use	:	For further information, refer to product data sheet.

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with 29 CFR 1910.1200

Skin corrosion	:	Category 1C
Serious eye damage	:	Category 1
Skin sensitization	:	Category 1
Carcinogenicity (Inhalation)	:	Category 1A
Specific target organ toxicity - single exposure	:	Category 3 (Respiratory system)
Specific target organ toxicity - repeated exposure	:	Category 1 (Lungs)

GHS label elements

Hazard pictograms :

Signal Word	:	Danger
Hazard Statements	:	H314 Causes severe skin burns and eye damage. H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.
H350 May cause cancer by inhalation.
H372 Causes damage to organs (Lungs) through prolonged or repeated exposure.

Precautionary Statements :

Prevention:

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing must not be allowed out of the workplace.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Additional Labeling

There are no ingredients with unknown acute toxicity used in a mixture at a concentration >= 1%.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures

Components

Chemical name	CAS-No.	Classification	Concentration (% w/w)
Quartz (SiO2)	14808-60-7	Carc. 1A; H350i STOT RE 1; H372 STOT SE 3; H335	>= 50 - < 70
Portland cement	65997-15-1	Skin Corr. 1C; H314 Eye Dam. 1; H318 Skin Sens. 1; H317 STOT SE 3; H335	>= 30 - < 50
aluminium oxide	1344-28-1		>= 1 - < 5

Actual concentration is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Consult a physician.
Show this material safety data sheet to the doctor in attendance.

If inhaled : Move to fresh air.
Consult a physician after significant exposure.

In case of skin contact : Take off contaminated clothing and shoes immediately.
Wash off with soap and plenty of water.
Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty.

In case of eye contact : Small amounts splashed into eyes can cause irreversible tissue damage and blindness.
In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Continue rinsing eyes during transport to hospital.
Remove contact lenses.
Keep eye wide open while rinsing.

If swallowed : Clean mouth with water and drink afterwards plenty of water.
Do not induce vomiting without medical advice.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
Take victim immediately to hospital.

Most important symptoms and effects, both acute and delayed : Prolonged exposure can cause silicosis.
Health injuries may be delayed.
corrosive effects
irritant effects
sensitizing effects

Cough
Respiratory disorder
Allergic reactions
Dermatitis
May cause an allergic skin reaction.
Causes serious eye damage.
May cause respiratory irritation.
May cause cancer by inhalation.
Causes damage to organs through prolonged or repeated exposure.
Causes severe burns.

Notes to physician : Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Avoid breathing dust.
Deny access to unprotected persons.

Environmental precautions : Do not flush into surface water or sanitary sewer system.
If the product contaminates rivers and lakes or drains inform respective authorities.
Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up : Pick up and arrange disposal without creating dust.
Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion : Avoid dust formation.
Provide appropriate exhaust ventilation at places where dust is formed.

Advice on safe handling : Avoid formation of respirable particles.
Avoid exceeding the given occupational exposure limits (see section 8).

Do not get in eyes, on skin, or on clothing.
For personal protection see section 8.
Persons with a history of skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
Smoking, eating and drinking should be prohibited in the application area.
Follow standard hygiene measures when handling chemical products.

Conditions for safe storage : Store in original container.
Keep in a well-ventilated place.
Observe label precautions.
Store in accordance with local regulations.

Materials to avoid : Explosives
Oxidizing agents
Poisonous gases
Dangerous when wet
Flammable solids
Organic peroxides
Poisonous liquids
Spontaneously Combustible Substances

Further information on storage stability : Keep in a dry place.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Quartz (SiO2)	14808-60-7	TWA (Respirable particulate matter)	0.025 mg/m3	ACGIH
		TWA (Respirable dust)	0.05 mg/m3	OSHA Z-1
		TWA (respirable)	10 mg/m3 / %SiO2+2	OSHA Z-3
		TWA (respirable)	250 mppcf / %SiO2+5	OSHA Z-3
		TWA (respirable dust fraction)	0.1 mg/m3	OSHA P0
		TWA (Respirable particulate matter)	0.025 mg/m3 (Silica)	ACGIH
		TWA (respir-	0.1 mg/m3	OSHA P0

		able dust fraction)		
		TWA (Respirable particulate matter)	0.025 mg/m3	ACGIH
		TWA (Respirable particulate matter)	0.025 mg/m3 (Silica)	ACGIH
Portland cement	65997-15-1	TWA (Respirable particulate matter)	1 mg/m3	ACGIH
		TWA (total dust)	15 mg/m3	OSHA Z-1
		TWA (respirable fraction)	5 mg/m3	OSHA Z-1
		TWA (Total dust)	10 mg/m3	OSHA P0
		TWA (respirable dust fraction)	5 mg/m3	OSHA P0
		TWA (Dust)	50 Million particles per cubic foot	OSHA Z-3
		TWA (Total)	10 mg/m3	OSHA P0
		TWA (Respirable fraction)	5 mg/m3	OSHA P0
aluminium oxide	1344-28-1	TWA (total dust)	15 mg/m3	OSHA Z-1
		TWA (respirable fraction)	5 mg/m3	OSHA Z-1
		TWA (Total dust)	10 mg/m3	OSHA P0
		TWA (respirable dust fraction)	5 mg/m3	OSHA P0
		TWA (Respirable particulate matter)	1 mg/m3 (Aluminum)	ACGIH

The above constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

Particles of nuisance dust

Form of exposure	Value type	Control parameters	Basis
total dust	TWA	15 mg/m3	OSHA Z-3
respirable fraction	TWA	5 mg/m3	OSHA Z-3

Engineering measures : Use of adequate ventilation should be sufficient to control worker exposure to airborne contaminants. If the use of this product generates dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Personal protective equipment

Respiratory protection : Use a properly fitted NIOSH approved air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapor/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used.

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Eye protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary.

Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.

Hygiene measures : Avoid contact with skin, eyes and clothing.
Wash hands before breaks and immediately after handling the product.
Remove contaminated clothing and protective equipment before entering eating areas.
Wash thoroughly after handling.
Avoid breathing dust.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	powder
Color	:	gray
Odor	:	odorless
Odor Threshold	:	No data available
pH	:	Not applicable
Melting point/range / Freezing point	:	No data available

Boiling point/boiling range	:	No data available
Flash point	:	Not applicable
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapor pressure	:	No data available
Relative vapor density	:	No data available
Density	:	ca. 2.85 g/cm3 (73 °F / 23 °C)
Solubility(ies)		
Water solubility	:	insoluble
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available
Volatile organic compounds (VOC) content	:	Not applicable

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	The product is chemically stable.
Possibility of hazardous reac-	:	Stable under recommended storage conditions.

tions

Conditions to avoid	:	No data available
Incompatible materials	:	No data available
Hazardous decomposition products	:	No decomposition if stored and applied as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

Not classified based on available information.

Skin corrosion/irritation

Causes severe burns.

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitization

Skin sensitization

May cause an allergic skin reaction.

Respiratory sensitization

Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

May cause cancer by inhalation.

IARC	Group 1: Carcinogenic to humans Quartz (SiO2) (Silica dust, crystalline)	14808-60-7
OSHA	OSHA specifically regulated carcinogen Quartz (SiO2) (crystalline silica)	14808-60-7
NTP	Known to be human carcinogen Quartz (SiO2) (Silica, Crystalline (Respirable Size))	14808-60-7

Reproductive toxicity

Not classified based on available information.

STOT-single exposure

May cause respiratory irritation.

STOT-repeated exposure

Causes damage to organs (Lungs) through prolonged or repeated exposure.
Prolonged exposure can cause silicosis.
Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Aspiration toxicity

Not classified based on available information.

Further information

Product:

Quartz (14808-60-7): This classification is relevant when exposed to Quartz (silicon dioxide) in dust or powder form only, including cured product that is subject to sanding, grinding, cutting, or other surface preparation activities.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

No data available

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

Product:

Additional ecological information : Do not empty into drains; dispose of this material and its container in a safe way.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Domestic regulation

49 CFR
Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION

TSCA list : All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory exemption.

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity
This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity
This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity
This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Respiratory or skin sensitization
Carcinogenicity
Specific target organ toxicity (single or repeated exposure)
Skin corrosion or irritation
Serious eye damage or eye irritation

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:

aluminium oxide	1344-28-1	>= 1 - < 5 %

Clean Air Act
This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

California Prop 65 ⚠ **WARNING:** Cancer and Reproductive Harm - www.P65Warnings.ca.gov

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
OSHA P0	:	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
OSHA Z-1	:	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
OSHA Z-3	:	USA. Occupational Exposure Limits (OSHA) - Table Z-3 Mineral Dusts
ACGIH / TWA	:	8-hour, time-weighted average
OSHA P0 / TWA	:	8-hour time weighted average
OSHA Z-1 / TWA	:	8-hour time weighted average

OSHA Z-3 / TWA : 8-hour time weighted average

Notes to Reader

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US / Z8

How-To-Use SikaGrout® 212

Anchoring Grout

Materials:

- Safety glasses and gloves
- Bag of SikaGrout 212
- Sufficient water for desired mix
- Mixing container
- Mixing paddle
- Trowel or shovel (for smaller quantities)
- Drill and mortar paddle (for larger quantities)

Procedure

1. Remember to always wear waterproof gloves and safety goggles whenever mixing or using cement-based products.

2. Mix the grout with clean water in a separate mixing container for 3 minutes to obtain desired consistency. Add only enough water to achieve the flow required for the application. Less water for dry-pack consistency and more water for a fluid consistency. Maximum addition of water is 8.5 pints per 50 lb. bag.

3. Small quantities can be mixed with a trowel or shovel. For best results, larger quantities should be mixed with a slow speed drill and mortar paddle or a conventional mortar mixer.

4. Within 15 minutes of mixing, place the grout in the hole or void. Pour or ram grout as necessary, to fill the form area.

Guía de Uso
SikaGrout® 212
Anchoring Grout

Materials:

- Gafas de seguridad y guantes impermeables
- Bolsa de SikaGrout 212
- Suficiente agua para la mezcla deseada
- Recipiente de mezcla
- Llana o pala (para cantidades pequeñas)
- Taladro y paleta de mezcla or mezclador portátil para morteros (para cantidades grandes)

Procedure

1. Recuerde de siempre usar guantes impermeables y gafas de seguridad al mezclar y usar productos con base en cemento.

2. Mezcle el mortero con agua potable en un recipiente por 3 minutos hasta obtener la consistencia deseada. Añada únicamente el agua necesario para alcanzar la fluidez deseada para la aplicación (menos agua para una consistencia pastosa y más agua para una consistencia fluida). La máxima cantidad de agua es de 136 onzas fluidas por bolsa de 50 libras.

3. Cantidades pequeñas se pueden mezclar con llana o pala. Para mejores resultados, cantidades grandes se deben mezclar con taladro y paleta de mezcla o en un mezclador portátil para morteros.

4. El producto se debe colocar dentro de los 15 minutos después de mezclado. Según el caso, vierta or presione el producto dentro del espacio u hoyo para rellenar completamente el área preparada.