# SHOP DRAWING REVIEW FORM AND TRANSMITTAL

**DATE:** October 27, 2021

TO: Carl Hendrickson FROM: Michael Andrus, P.E.

Project Manager
Veolia Water

Project Manager
BETA Group, Inc.

825 West Water Street 701 George Washington Hwy Taunton, MA 02780 Lincoln, Rhode Island 02865

**RE:** City of Taunton, MA

WWTF Phase 1 Improvements

Contract S-2021-1

Shop Drawing No. 02224 - Controlled Density Fill

#### **BETA COMMENTS:**

# Item Action Code Description/Comments

1 Controlled Density Fill (Redi Mix)

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:** 02224-01

PROJECT: 9900. - Veolia/Taunton WWTF Phase 1 Improvements **DATE: 10/12/2021** 

**SUBMITTAL:** 02224-01 - Controlled Density Fill

**REVISION:** 0 STATUS: Eng **SPEC** #: 02224

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
02224-01	0	Controlled Density Fill	Eng	10/12/2021	
Notes:	•				

## Additional Notes:

Status	Codes
SILLIN	Codes

Status Codes		
1-APP – No Exce	ptions Taken	
2-ANR – Make C	SHOP DRAWING REVIEW	1
3-R&R – Revise a		
4-REJ – Rejected	1 – Approved 2 – Approved as Noted	
5-IPO – For Infor	3 – Revise and Resubmit 4 - Rejected	
6-NRR – Not Req	5 – Record File Only – No Action Taken	
ENG – Submitted	(Above Check Designates Action Code – See Review Comments)	
	IMPORTANT NOTE FOR CONTRACTOR	
Sincerely, Hart Engineering	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	10/12/2021
	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:	
	BETA GROUP, INC. Checked By:	
	By:BN10/21/21	Paga

# REDI MIX SERVICES INC

120 Berkley Street

Phone

(508) 823-0771

Taunton, Mass. 02780

Fax

(508) 823-7305

**Project:** 

**Taunton WWTP** 

Contractor: Hart Engineering

Presented below is a mix design proportioned to produce one cubic yard of concrete to meet the requirements of Section 033000 of this projects sepcifications.

The mix quantities have been developed in accordance with ACI Standards 301 based upon the specific charectereistics of the material proposed use.

MIX #		17100
STRENGTH	PSI	NON-EX
C.A. SIZE	INCH	FINE
USE		FILL
CEMENT	LBS.	100
SLAG	LBS.	100
FINE AGG	LBS.	2671
WATER	GAL	36.0
W/C RATIO		1.5
SLUMP	INCHES	4-6" +/-1
AIR CONTENT	%	-
SIKA LIGHTCRETE	LBS.	1.5

<sup>\*</sup> Slump at Point Of Placement

Remarks: The mix quantities stated are basic quantities for aggregates in a saturated surface dry condition. These quantities will be adjusted for specific moisture content, workability, slump, and yield at the time of batching.

Notes: Mid Range Water Reducer Included in Mix Deign. Pumpable Mix.

9/17/2021 TJH



# Mill Test Certificate Report

Type:

1-0 ASTM, HI AASHTO

Grind Number:

Canakkale Import Cement, Lot 2

Test Period: 02/10/21 to: 02/10/21

#### Certification

Lehigh Cement Company, LLC certifies that at time of shipment, the portland cement designated as Type HI manufactured at the Akcansa, Canakkale, Turkey plant conforms to the standard composition and physical requirements of the current Standard Specification for Portland Cement of ASTM C 150 and AASHTO M85 for Type I and Type II portland cement. This certification cernies no other express or implied warranties and Lehigh Cement Company LLC, is not responsible for improper use or workmanship of the described cement.

#### General Information

Supplier:

Lehigh Cement Company LLC

Source Location: Canakkale, Turkey

Address:

55 Field Point Dr

Providence, RI 02905

Contact: Sales Office

Telephone:	800-833-4157					
	Test	Data on AST	M "Standard" Requirements			
Chemical Requirements (ASTM C-150, Table 1)			Physical Requirements (ASTM C-150, Table 3)			
liom	Limit	Results	l terre	Limit	Results	
SiO <sub>2</sub>	٨	19.39	Fineness:		of the angle of the control of the c	
ALD.	S.O Max	4,48	% Passing 45µm (No. 325)	Α	95.37	
Fe <sub>j</sub> O <sub>3</sub>	5.0 Max	3.26	Blaine Fineness (m²/Kg)	260 min	364	
CeO	A	63.78			vipilgany namagadi tao no 1911-19	
MgO	6.0 niex	2.87	Autoclave Expension (%)	0.8 max	0.01	
SO <sub>3</sub>	D	2.60	Vical Setting Time:	- L	was.	
Loss on Ignation	3.5 max	216	Initial Set (minutes)	45 mm	125	
Na <sub>2</sub> O	Α	0,04			Landon i variantante destini Mel	
K,()	A	(1.60	Air Content (%)	12 max	7.3	
Insoluble Residue	1.5 max	0.58				
CO2	A	1.58	Compressive Strengths Mpa:			
Limestone %	5.0 max	3.70	1-Day	A	19.46	
CaCO, in Limestone	70% Min	97.0	3-Day	12.0 min	30.05	
			7-Day	19.0 min	38.24	
Potential Compounds:		Adjusted	28-Day	A	un grante representation and	
C.S	A	62.48	in desired the second of the s			
C23	A	8.36	Compressive Strungflws, PSI:			
C <sub>3</sub> A	8.0 Max	6.35	1-Dayi	A	2822	
CAR!	A	9,91	3-Day	1450 man	4357	
C35+4.75°C3A	<100	96	7-Day	2470 min	5546	
per britis de la companya del companya del companya de la companya			28-13ay	A	para-in regionidant ante hydis	
THE STATE OF THE S			Morter Ber Expansion, C-1038, %	. Max 0.020	and the second s	
	Te	est Data on A	STM Optional Requirement			
Chemical Requirements	LASTIN C-150, Tab	de 2)	Physical Requirements (AS	M C-160, Table 4)		
(Seet)	Limit	Results	liam	Lavait	Result	
Equivalent Alkaties		0.44	False Set	Min 50	86	

Chemical Requirements (	ASTM C-150, Tab	le 2)	Physical Requirements (AST	M C-160, Table 4)	
(Servi	KOLL	Results	(lam)	Layar	Result
Equivalent Alkaties		0.44	False Set	Min 50	86
			Heat of Hydration, 3-day C-1702, cal/g	A CONTRACTOR OF STREET	- B produced - constraint Spectroscop of Spectroscop produced - constraint Spectroscop of Spectroscop
The second secon	THE RESERVE OF THE PARTY OF THE	A CONTRACTOR OF THE PARTY OF TH	A ALCOHOL V PRODU		

#### Additional Data

ASSESSMENT OF THE PERSON NAMED IN	ALVERTICATE AND AND AND AND AND ADDRESS OF THE PARTY OF T	Inorganic Processing		
itoms .	Limestone	Addition	Base Cement Phase Compostion	Result
Amount	3.70	NA NA	IC <sub>3</sub> 8	54,88
510,	1.45	NA NA	ICS	8,68
ALO <sub>3</sub>	0.58	NA	C:A	6,59
Fe <sub>2</sub> O <sub>3</sub>	9.26	NA	CAL.	10.23
CaC	51.07	NA	Commence of the state of the st	
SO,	0.04	NA.		naj mentuphaj vol ecolojiska estalaturit Voline

Notes

A; no limit applicable D: if SO3 exceeds 3.0%, C-1038 shall not be more than 6.020% 7 March

February 17; 2021

Quality Control Manager:





Brand: Material:

Type:

**NewCem®** 

Grade 120

**Slag Cement** 

**Material Certification Report** 01-August-2021 to 31-August-2021 **Test Period:** 

Lot Number: **Multiple Lots** 

#### Certification

This cement meets the specifications of ASTM C989 and AASHTO M 302 for Grade 120 slag cement.

#### **General Information**

Supplier: Address: Holcim (US) Inc. d/b/a LafargeHolcim US

8700 West Bryn Mawr Ave Chicago, IL 60631

Source Location:

**Sparrows Point Plant** 

2001 Wharf Road Baltimore, MD 21219

Contact:

Brian Borowski (630) 561-1198

The following is based on average test data during the test period. The data is typical of product shipped from this source; individual shipments may vary.

	Test Da	ta on ASTM S	tandard Requirements		
Che	mical		Physical		
Item	, Limit 1	Result	Item	Limit 1	Result
Sulfide Sulfur (S) (%)	2.5 max	0.6	+45 μm (No. 325) Sieve (%)	20 max	1,6
			Blaine Fineness (m²/kg)	(Ne)	652
Sulfate Sulfur (as SO <sub>3</sub> ) <sup>2</sup> (%)	*	0.3	Air Content (%)	12 max	5.2
Aluminum Oxide (as Al <sub>2</sub> O <sub>3</sub> ) (%)	_	12.1			
			Slag Activity Index (%) Avq 7 Day Index	_	103
Chloride (CI) (%)		0.007	Avg 28 Day Index (previous month's data)	115 min	138
Equivalent Alkalies (%)	-	0.5	Compressive Strength MPa (psi)		
			Slag + Reference Cement		
			7 Day	-	34.7 (5030)
			28 Day (previous month's data)	-	52.2 (7570)

	A	Te	st Data on Re	ference Cement		
	Chemical			Ph	ysical	
Item		Limit 1	Result	Item	Limit 1	Result
Equivalent Alkalies (%)		0.60 - 0.90	0.80	7 Day	-	33.6 (4880)
				28 Day (previous month's data)	5000 min	36.4 (5480)

#### Notes (\*1-5)

- 1 Dashes in the limits columns means Not Applicable
- 2 If calcium sulfate is added to slag cement, measure in accordance with Test Method C1038/C1038M. Slag cement with added calcium sulfate will not develop expansion exceeding 0.020% at 14 days.
- 3 Information on Reference Cement test data available upon request.
- 4 Specific Gravity:
- 2.95

5 - This data may have been reported on previous Material Certification Reports. It is typical of the cement being currently shipped

3B1

Brian Borowski

Quality Manager, US MPC

Date Issued:

9/17/2021



# PRODUCT DATA SHEET

# Sika® Lightcrete Powder

#### FLOWABLE FILL ADMIXTURE

#### PRODUCT DESCRIPTION

Sika® Lightcrete Powder is a dry powdered surfactant packaged in a patented, ready to-use, water soluble bag. Sika® Lightcrete Powder produces controlled low strength material (CLSM), also referred to as flowable fill, controlled density fill (CDF), lean mix backfill, unshrinkable fill or flowable mortar. Sika® Lightcrete Powder is compatible with all conventional CLSM materials.

#### **USES**

Sika® Lightcrete Powder is recommended for use whenever the material for structural fill or backfill is requested. Sika® Lightcrete Powder is ideal for use in tight or restricted areas where placing and compacting soil or granular fill is difficult or even impossible. Typical CLSM applications are filling voids under existing pavements, buildings or other structures, backfilling narrow trenches, and filling abandoned underground structures such as culverts, pipes, tunnels, storage tanks, wells, sewers, etc.

# **CHARACTERISTICS / ADVANTAGES**

- Water-soluble bag readily breaks down even in very fluid mixes. Reduces potential for exposure to chemicals in the bag.
- Easy handling and storage because Sika<sup>®</sup> Lightcrete Powder is a dry powder, not a liquid.
- No problems with leakage, heat damage, or freezing.
- Produces an extremely fluid material with minimal shrinkage or segregation.
- Eliminates the need for compaction of layered backfill.
- Produces very stable air contents.
- Significantly faster and less labor intensive than compacted soil fill.
- Sika® Lightcrete Powder is compatible with all conventional CLSM materials.
- Sika<sup>®</sup> Lightcrete Powder contains no calcium chloride or other corrosive agents.

#### PRODUCT INFORMATION

Packaging	1 lb. water soluble bag, 24 bags/case, 720 bags/pallet	
Shelf Life	One year in unopened bag	
Storage Conditions	Store in dry warehouse conditions between 50 °F and 80 °F (10–27 °C)	

## APPLICATION INFORMATION

Recommended Dosage	Dosage rates will vary according to materials used, ambient conditions and requirements of a specific project. Sika® recommends use one 1 lb. (454 g) bag to produce 1 cubic yard of controlled low strength material (CLSM). Dosage rates outside the recommended range may be used when unusual project conditions require special consideration. In this case, Please contact your local Sika® representative or Sika® Technical Service Department 1-800- 933-7452 for more information and assistance.
Mixing	Sika® Lightcrete Powder should be added to the drum with the primary mix water. Remove the outer bag. Add the inner bag to the central mixer or ready mix truck drum. After all ingredients are added, the drum should be turned at mixing speed for 5–7 minutes. Sika® Lightcrete Powder will increase the material volume 20–35 %. Controlled Low Strength Material (CLSM) can be placed directly from the ready mix truck.

#### **LIMITATIONS**

Superplasticizers, water reducers and dispersants may reduce the effectiveness of Sika® Lightcrete Powder.

#### **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.

#### **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 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 AP-PLY INCLUDING ANY WARRANTY OF MERCHANTABIL-ITY 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 OTH-ERS.

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 201-933-8300.



Sika Corporation 201 Polito Avenue Lyndhurst, NJ 07071 Phone: 800-933-7452 Fax: 201-933-6225 Sika Canada Inc. 601 Delmar Avenue Pointe Claire Quebec H9R 4A9 Phone: 514-697-2610 Fax: 514-694-2792 Sika Mexicana S.A. de C.V.
Carretera Libre Celaya Km. 8.5
Fracc. Industrial Balvanera
Corregidora, Queretaro
C.P. 76920
Phone: 52 442 2385800
Fax: 52 442 2250537



Product Data Sheet Sika® Lightcrete Powder November 2018, Version 01.02 021404031000000011 BUILDING TRUST

SikaLightcretePowder-en-US-(11-2018)-1-2.pdf

# REDI MIX SERVICES INC

120 Berkley Street Taunton, Mass. 02780 Phone Fax

(508) 823-0771 (508) 823-7305

**Project:** 

**Taunton WWTP** 

**Contractor: Hart Engineering** 

Presented below is a mix design proportioned to produce one cubic yard of concrete to meet the requirements of Section 033000 of this projects sepcifications.

The mix quantities have been developed in accordance with ACI Standards 301 based upon the specific charectereistics of the material proposed use.

MIX #		17200
STRENGTH	PSI	EXCAV.
C.A. SIZE	INCH	FINE
USE		FILL
CEMENT	LBS.	90
FINE AGG	LBS.	2407
WATER	GAL	38.0
W/C RATIO		3.517
SLUMP	INCHES	10-12" +/-1
AIR CONTENT	%	-
SIKA LIGHTCRETE	LBS.	3

<sup>\*</sup> Slump at Point Of Placement

Remarks: The mix quantities stated are basic quantities for aggregates in a saturated surface dry condition. These quantities will be adjusted for specific moisture content, workability, slump, and yield at the time of batching.

Notes: Mid Range Water Reducer Included in Mix Deign. Pumpable Mix.

9/17/2021 TJH



## **Mill Test Certificate Report**

Type:

HI ASTM, HI AASHTO

Grind Number:

Canakkale Import Cement, Lot 2

Test Period: 02/10/21 to: 02/10/21

#### Certification

Lehigh Cement Company, LLC certifies that at time of shipment, the portland cement designated as Type I-II manufactured at the Akcansa, Canakkale, Turkey plant conforms to the standard composition and physical requirements of the current Standard Specification for Portland Cement of ASTM C 150 and AASHTO M85 for Type I and Type II portland cement. This certification carries no other express or implied warranties and Lehigh Cement Company LLC, is not responsible for improper use or workmanship of the described cement.

#### General Information

Lehigh Cement Company LLC

Source Location: Canakkale, Turkey

Supplier: Address:

55 Field Point Dr Providence, RI 02965

Contact: Sales Office

Telephone:

800-833-4157

	Test	Data on AST	M "Standard" Requirements			
Chemical Requirements (ASTM C-150, Table 1)			Physical Requirements (ASTM C-150, Table 3)			
liem	Limit	Results	1 (fern	Limit	Results	
SiO <sub>2</sub>	Α	19.39	Fineness:		elating and consequently the pro-	
AI/O <sub>1</sub>	6.0 Max	4.48	% Passing 45µm (No. 325)	Α	95.37	
Fe <sub>2</sub> O <sub>3</sub>	5.0 Max	3.26	Blaine Fineness (m²/Kg)	260 min	364	
CeC	A	63.78			The state of the s	
MgO	6.0 max	2.87	Autoclave Expansion (%)	9.8 max	0.01	
SO <sub>3</sub>	. D	2,60	Vical Setting Time:			
Loss on Ignition	3.5 max	2.16	(mittel Set (minutes)	45 min	125	
Ne <sub>2</sub> O	Α	0.04			Brandonnya dabba bernasakan da	
(C,C)	Α.	0.60	Air Content (%)	12 mex	7.3	
Insoluble Residue	1.5 max	0.58				
CO <sub>2</sub>	A	1.58	Compressive Strengths Mpa:		province and provi	
Licuestone %	5.0 max	3.70	1-Day	А	19.46	
CaCO <sub>3</sub> in Limestone	70% Nin	97.0	3-Day	12.0 min	30,05	
			7-Day	19,0 min	38.24	
Potential Compounds:		Adjusted	28-Day	A	THE COMPANY WAS TO SHEET OF	
C <sub>3</sub> S	A	62.48				
C <sub>2</sub> S	A	8.36	Compressive Strengths, PSt.		manadorbano morto de Promiso de alto	
C <sub>5</sub> A	8.0 Max	6.35	1-Day	A	2822	
C,A:	A	9,91	3-Day,	. 1450 min	4357	
C <sub>3</sub> S+4,75°C <sub>3</sub> A	<100	96	7-Day.	2470 min	5546	
			28-11ay	A	paramatana dalamakan	
			Morter Bar Expansion, C-1038, %	Max 0.020		

# Test Data on ASTM Optional Requirement

			CARL STATE OF THE PARTY OF THE	The second section of the second section is a second section of the second section in the second section is a second section of the second section in the second section is a second section of the second section in the second section is a second section of the s	AND DESCRIPTION OF THE PERSON	
Chemical Requirements (ASTM C-150, Table 2)			Physical Requirements (ASTM C-150, Table 4)			
ttem	Limit	Results	Item?		Limit	Result
Equivalent Alkabos		8,44	False Set		Min 50	86
	A Section of the Section (Section Section Sect		Heat of Hydration, 34	day C-1702, cat/g		
		Add	Itional Data			
s dryppi rayanjeninga jennega pokalani kalanina	and provide the second second second second	I norganic Processing	The second secon	Market of the second second second second second	Carlotte St. Floor	
itaes .	Limestons	Addition	Base Coment Phase	- Compostion		Result
Amount	3,70	NA	IC <sub>3</sub> S			64,88
\$103	1.45	NA	TC,S	azar ng ga agunyununun dhalipunlun habiyada dhi untiblasha-darbantan tarib.		8,68
and the second s	- August and the state of the s		And the second section of the s	he services i de religión noticulo por Amelijanos monerándos el la sectivo de glinecia ejempos, y mentos	The first own statement of the statement	At East

MA AS,O3 0.58 F0203 0.26 NA. CaO SO<sub>3</sub> 51,07 NA 0,04 NA

Notes

C.AF

Footnotes:

A: no limit applicable D: if SC3 excends 3.0%, C-1038 shall not be more than 0.020%

February 17, 2021

Date

Quality Control Manager:

10.29



# PRODUCT DATA SHEET

# Sika® Lightcrete Powder

#### FLOWABLE FILL ADMIXTURE

#### PRODUCT DESCRIPTION

Sika® Lightcrete Powder is a dry powdered surfactant packaged in a patented, ready to-use, water soluble bag. Sika® Lightcrete Powder produces controlled low strength material (CLSM), also referred to as flowable fill, controlled density fill (CDF), lean mix backfill, unshrinkable fill or flowable mortar. Sika® Lightcrete Powder is compatible with all conventional CLSM materials.

#### **USES**

Sika® Lightcrete Powder is recommended for use whenever the material for structural fill or backfill is requested. Sika® Lightcrete Powder is ideal for use in tight or restricted areas where placing and compacting soil or granular fill is difficult or even impossible. Typical CLSM applications are filling voids under existing pavements, buildings or other structures, backfilling narrow trenches, and filling abandoned underground structures such as culverts, pipes, tunnels, storage tanks, wells, sewers, etc.

# **CHARACTERISTICS / ADVANTAGES**

- Water-soluble bag readily breaks down even in very fluid mixes. Reduces potential for exposure to chemicals in the bag.
- Easy handling and storage because Sika<sup>®</sup> Lightcrete Powder is a dry powder, not a liquid.
- No problems with leakage, heat damage, or freezing.
- Produces an extremely fluid material with minimal shrinkage or segregation.
- Eliminates the need for compaction of layered backfill.
- Produces very stable air contents.
- Significantly faster and less labor intensive than compacted soil fill.
- Sika® Lightcrete Powder is compatible with all conventional CLSM materials.
- Sika<sup>®</sup> Lightcrete Powder contains no calcium chloride or other corrosive agents.

#### PRODUCT INFORMATION

Packaging 1 lb. water soluble bag, 24 bags/case, 720 bags/pallet			
Shelf Life	One year in unopened bag		
Storage Conditions	Store in dry warehouse conditions between 50 °F and 80 °F (10–27 °C)		

## **APPLICATION INFORMATION**

Recommended Dosage	Dosage rates will vary according to materials used, ambient conditions and requirements of a specific project. Sika® recommends use one 1 lb. (454 g) bag to produce 1 cubic yard of controlled low strength material (CLSM). Dosage rates outside the recommended range may be used when unusual project conditions require special consideration. In this case, Please contact your local Sika® representative or Sika® Technical Service Department 1-800- 933-7452 for more information and assistance.
Mixing	Sika® Lightcrete Powder should be added to the drum with the primary mix water. Remove the outer bag. Add the inner bag to the central mixer or ready mix truck drum. After all ingredients are added, the drum should be turned at mixing speed for 5–7 minutes. Sika® Lightcrete Powder will increase the material volume 20–35 %. Controlled Low Strength Material (CLSM) can be placed directly from the ready mix truck.

#### **LIMITATIONS**

Superplasticizers, water reducers and dispersants may reduce the effectiveness of Sika® Lightcrete Powder.

#### **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.

#### 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 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 AP-PLY INCLUDING ANY WARRANTY OF MERCHANTABIL-ITY 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 OTH-ERS.

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 201-933-8300.



Sika Corporation 201 Polito Avenue Lyndhurst, NJ 07071 Phone: 800-933-7452 Fax: 201-933-6225

Sika Canada Inc. 601 Delmar Avenue Pointe Claire Quebec H9R 4A9 Phone: 514-697-2610 Fax: 514-694-2792

Sika Mexicana S.A. de C.V. Carretera Libre Celaya Km. 8.5 Fracc. Industrial Balvanera Corregidora, Queretaro C.P. 76920

Phone: 52 442 2385800 Fax: 52 442 2250537



**Product Data Sheet** Sika® Lightcrete Powder November 2018, Version 01.02 021404031000000011

SikaLightcretePowder-en-US-(11-2018)-1-2.pdf **BUILDING TRUST**