

PRODUCT DATA SHEET

King[®] LH-S10

Pre-packaged, 5000 psi concrete mix for construction of bulk/mass concrete elements



PRODUCT DESCRIPTION

King[®] LH-S10 is a pre-blended, pre-packaged, 5070 psi (35 MPa) concrete mix containing Portland cement, fine and coarse aggregate and other carefully selected components designed for construction of bulk/mass concrete elements.

USES

- Construction of bulk/mass concrete elements

CHARACTERISTICS / ADVANTAGES

- Requires only the addition of water
- Air-entrainment provides superior resistance to freeze-thaw cycling and salt-scaling in the presence of de-icing salts
- Designed with natural normal-density non-reactive fine and coarse aggregates to eliminate potential alkali aggregate reactivity (AAR)
- Low heat of hydration (Type LH binder content) allows for pouring in bulk/mass concrete sections

PRODUCT INFORMATION

Packaging	66 lb (30 kg) bag or 2,205 lb (1,000 kg) FIBC*, polywrapped on wooden pallets. All KING products can be custom packaged to suit specific job requirements. <small>*FIBC: Flexible Intermediate Bulk Container</small>	
Shelf Life	12 months in original, unopened packaging	
Storage Conditions	Store dry, ensuring that product is not exposed to rain, condensation or high humidity.	
Density	MASS DENSITY 148 lb/ft ³ (2,375 kg/m ³)	ASTM C39

TECHNICAL INFORMATION

Compressive Strength	7 days	3,620 psi (25 MPa)	ASTM C39
	28 days	5,070 psi (35 MPa)	
Porosity	AIR CONTENT 4.0 % – 9.0 %		ASTM C231

APPLICATION INFORMATION

Coverage	<ul style="list-style-type: none">▪ 66 lb (30 kg) bag contains approximately 0.5 ft³ (0.014 m³)▪ 2,205 lb (1,000 kg) bag contains approximately 15.5 ft³ (0.44 m³)
Flowability	SLUMP ASTM C143 4 inch ± 2 inch (100 mm ± 50 mm)
Cure Time	Curing is essential to optimize physical properties of the concrete and minimize plastic shrinkage. Cure immediately after material has reached initial set in accordance with ACI 308 <i>"Guide to Curing Concrete"</i> . Continuously moist cure for a minimum period of seven (7) days. Curing is particularly critical in rapid moisture loss conditions such as high temperatures, high winds and low humidity.

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.

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.

APPLICATION INSTRUCTIONS

MIXING

For a 66 lb (30 kg) bag place 75 % of required water into mixer and slowly introduce entire bag of King® LH-S10. Add balance of required water slowly while mixer is running, not exceeding maximum recommended volume of water. Maximum recommended volume of water is 0.67 US gal. (2.55 L) per 66 lb (30 kg) bag. Continue mixing for a minimum of three (3) minutes and stop only when the mixed material has obtained a homogeneous consistency. For a 2,205 lb (1,000 kg) FIBC, the recommended volume of water is 19.8 US gal. (75 L) to 23.5 US gal. (89 L). Mixing procedures for 1 000 kg FIBCs used with ready-mix trucks can be forwarded upon request.

APPLICATION

Mix and substrate temperatures should be maintained between 40 °F (5 °C) and 86 °F (30 °C), until the material has reached final set. Do not place King® LH-S10 when ambient temperature is below 40 °F (5 °C). Refer to ACI 306, *"Guide to Cold Weather Concreting"*. In warm weather, ice water may be used to cool mix temperature

and avoid short working time. When ambient temperature is above 86 °F (30 °C), refer to ACI 305, *"Guide to Hot Weather Concreting"*. Place material uniformly and consolidate by vibrating. Ensure material has completely encapsulated any rebar or welded wire mesh. Refer to ACI 304 R *"Guide for Measuring, Mixing, Transporting and Placing Concrete"*.

Any formwork should be rigid and tight to prevent loss of material. For forming applications, refer to ACI 347, *"Recommended Practice for Concrete Formwork"*.

CLEANING OF TOOLS

Clean all tools and equipment immediately after use with water. Once hardened, material can only be removed manually or mechanically.

OTHER RESTRICTIONS

See Legal Disclaimer.

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.

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Product Data Sheet

King® LH-S10
July 2023, Version 01.02
020302040030000515

KingLH-S10-en-US-(07-2023)-1-2.pdf

