

# PRODUCT DATA SHEET

## King PC-S10 35

Pre-packaged 35 MPa (5075 psi) concrete mix for general construction

### PRODUCT DESCRIPTION

King PC-S10 35 is a pre-packaged, 5075 psi (35 MPa) concrete mix for general construction. It is a pre-blended, pre-packaged, 5075 psi (35 MPa) concrete mix containing Portland cement, fine and coarse aggregate and other carefully selected components.

### USES

#### King PC-S10 35

- Construction of concrete bridge abutments, approach slabs, barrier walls, bridge decks or other concrete bridge elements
- Construction of concrete jersey barriers, curbs, gutters and other concrete structures

#### King PC-S10 35 NE

- Construction of concrete floor slabs, foundations wall or other concrete elements not exposed to freeze-thaw cycling. (NE - Non Air Entrained)

### CHARACTERISTICS / ADVANTAGES

#### King PC-S10 35

- 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)

#### King PC-S10 35 NE

- Requires only the addition of water
- Designed with natural normal-density non-reactive fine and coarse aggregates to eliminate potential alkali aggregate reactivity (AAR)

### PRODUCT INFORMATION

<b>Packaging</b>	66 lb (30 kg) or 2205 lb (1000 kg) bulk bags and polywrapped on wooden pallets. All KING products can be custom packaged to suit specific job requirements.
<b>Shelf Life</b>	Unopened bags have a shelf life of 12 months.
<b>Storage Conditions</b>	Material should be stored in a dry, covered area, protected from the elements.
<b>Density</b>	<b>MASS DENSITY</b> 148 lb/ft <sup>3</sup> (2375 kg/m <sup>3</sup> ) <span style="float: right;">ASTM C 39</span>

## TECHNICAL INFORMATION

<b>Compressive Strength</b>	<u>3 Day</u>	<u>2900 psi (20 MPa)</u>	<b>ASTM C 39</b>
	<u>7 Days</u>	<u>3620 psi (25 MPa)</u>	
	<u>28 Days</u>	<u>5070 psi (35 MPa)</u>	
<b>Porosity</b>	<b>AIR CONTENT (plastic properties)</b>		<b>ASTM C 231</b>
	5.0% - 8.0%		
	Not applicable in the case of King PC-S10 35 NE		

## APPLICATION INFORMATION

<b>Coverage</b>	<ul style="list-style-type: none"><li>▪ 66 lb (30 kg) bag contains approximately 0.5 ft<sup>3</sup> (0.014 m<sup>3</sup>)</li><li>▪ 2205 lb (1000 kg) bag contains approximately 15.5 ft<sup>3</sup> (0.44 m<sup>3</sup>)</li></ul>	
<b>Flowability</b>	<b>SLUMP ( plastic properties)</b> 4 inch (100 mm) ± 2 inch (50 mm)	<b>ASTM C 143</b>
<b>Cure Time</b>	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 "Guide to Curing Concrete". Continuously moist cure for a minimum period of 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.

## AVAILABILITY/WARRANTY

Products have the possibility of being : NE ( Not air-entrained)

## 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

#### King PC-S10 35

For a 66 lb (30 kg) bag place 75% of required water into mixer and slowly introduce entire bag of King PC-S10 35. 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 gallon (2.55 L) per 66 lb (30 kg) bag. Continue mixing for a minimum of 3 minutes and stop only when material has obtained a consistent homogeneous mix. For a 2205 lb (1000 kg) bag, the recommended volume of water is 19.8 US gallons (75 L) to 22.5 US gallons (85 L). Mixing procedures of when 2205 lb (1000 kg) bulk bags are used in ready-mix trucks can be forwarded upon request.

#### King PC-S10 35 NE

For a 66 lb (30 kg) bag place 75% of required water into mixer and slowly introduce entire bag of King PC-S10 35 NE. Add balance of required water slowly while mixer is running, not exceeding maximum recommended volume of water. Maximum recommended volume of water is 0.77 US gallon (2.90 L) per 66 lb (30 kg) bag. Continue mixing for a minimum of 3 minutes and stop only when material has obtained a consistent homogeneous mix. For a 2205 lb (1000 kg) bag, the recommended volume of water is 25.6 US gallons (97 L) per 2205 lb (1000 kg) bag. Mixing procedures of when 2205 lb (1000 kg) bulk bags are used in 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 PC-S10 35 and King PC-S10 35 NE 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 after use with water. Once hardened, the product can only be removed 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

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