

PC-S10 UG35 is a pre-packaged, 35 MPa concrete mix for underground construction. It is a pre-blended, pre-packaged, 35 MPa concrete mix containing Portland cement, fine and coarse aggregate and other carefully selected components.

## FEATURES & BENEFITS

- Requires only the addition of water
- Excellent pumpability
- All KING products are manufactured using ISO 9001:2015 Certified Processes

## USES

- Construction of concrete floor slabs, walls, grizzlies, door frames and other underground concrete structures

## PROCEDURES

**Mixing:** Mix material at a maximum water:cement ratio of 0.5 [100 L (26.5 US gallons) per 1,000 KG (2,205 lb) bag]. Maximum slump should be 100 mm (4 inches). For mixing instructions, follow recommendations of concrete mixer manufacturer.

**Placing:** 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".

## CURING

Good curing conditions are beneficial to optimizing physical properties. Although the high relative humidity commonly found in underground environments provides for good curing conditions, additional curing is often appropriate and should be performed in accordance with ACI 308 "Standard Practice for Curing Concrete".

## TECHNICAL DATA

The following data is representative of typical values achievable under laboratory conditions. Results in the field may vary.

## MASS DENSITY

ASTM C 39 2375 kg/m<sup>3</sup> (148 lb/ft<sup>3</sup>)

## COMPRESSIVE STRENGTH\*

### ASTM C 39

3 Day 21 MPa (3000 psi)

7 Day 25 MPa (3620 psi)

28 Day 35 MPa (5070 psi)

## FLEXURAL STRENGTH

### ASTM C 78

28 Day 6 MPa (2030 psi)

## OPTIMUM PERFORMANCE

- PC-S10 UG35 can be mixed using a KING CCM 200 Continuous Mixer (contact a KING Technical Representative for details)
- PC-S10 UG35 can also be poured using a dry-mix shotcrete machine and a KING Separator Box (contact a KING Technical Representative for details)

## YIELD

- 30 KG (66 lb) bag contains approximately 0.014 m<sup>3</sup> (0.5 ft<sup>3</sup>)
- 1,000 KG (2,205 lb) bag contains approximately 0.45 m<sup>3</sup> (16.5 ft<sup>3</sup>)

## PACKAGING

PC-S10 UG35 is normally packaged in 30 KG (66 lb) triple-lined bags, or in 1,000 KG (2,205 lb) bulk bags and polywrapped on wooden pallets. All KING products can be custom packaged to suit specific job requirements.

## STORAGE AND SHELF LIFE

Material should be stored in a dry covered area protected from the elements. Unopened bags have a shelf life of 12 months.

## SAFETY PROCEDURES

PC-S10 UG35 contains Portland cement. Normal safety-wear such as rubber gloves, dust mask and safety glasses used to handle conventional cement based products should be worn. Safety Data Sheets are available upon request.

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**Warranty:** This product is designed to meet the performance specifications outlined in this product data sheet. If the product is used in conditions for which it was not intended, or applied in a manner contrary to the written recommendations contained in the product data sheet, the product may not reach such performance specifications. The foregoing is in lieu of any other warranties, representations or conditions, expressed or implied, including, but not limited to, implied warranties or conditions of merchantable quality or fitness for particular purposes, and those arising by statute or otherwise in law or from a course of dealing or usage of trade. [REV.0003\_2458717.5]

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