



# AMBEX RAPID-SETTING SELF CONSOLIDATING CONCRETE RS-SCC

RS-SCC TECHNICAL INFORMATION

## DESCRIPTION

Rapid-Setting Self-Consolidating Concrete RS-SCC is a mix of Rapidset® cement, quality stone and sand combined with selected admixtures. This product is premixed and is available in bags. It is ready to use—simply add water and mix. This mix will produce ultra high early strengths and concrete can be opened to traffic and put into service within 2 hours. It is flowable and self-consolidating and can be placed in difficult and hard to reach locations. No external vibration is required. It contains an air entrainment admixture to ensure freeze-thaw and scaling resistance and meets ASTM C-666 and C-672 freeze-thaw durability and scaling tests. No chlorides are added. It contains 3/8 inch minus coarse aggregate and should not be used in thin featheredge applications.

## APPLICATIONS

RS-SCC can be used for repair and rehabilitation of concrete structures, pavements and bridge decks, bearing pads, machine bases, industrial floors and plant repairs where a quick turn around time is required and shut down time is critical. This product can be mixed with latex to obtain a resistant topping for flooring repairs. Ideal for interior or exterior applications.

## TECHNICAL SPECIFICATIONS

	METRIC	IMPERIAL
Yield (30 kg bag)	0.014 cu m.	0.5 cu ft.
(22.7 kg bag)	0.011 cu m.	0.38 cu ft.
Flow	600-700 mm	24" – 28"
Set Time (ASTM C191-92) 21°C (70°F)		
Initial Set Time	20 minutes	
Final Set Time	45 minutes	
Compressive Strength (ASTM C-109)		
3 hrs	35 MPa	5080 psi
24 hrs	45 MPa	6500 psi
7 Days	60 MPa	8700 psi
28 Days	64 MPa	9300 psi
Flexural Strength (ASTM C-348)		
24 hrs	9.3 MPa	1300 psi
7 Days	10.6 MPa	1500 psi
Bond Strength (ASTM C-882)		
24 hrs	16.4 MPa	2300 psi
7 Days	18.1 MPa	2600 psi
Freeze- thaw durability 100% (312 cycles) ASTM C-666		
Air void spacing factor 196 µ @ 6.5% air (ASTM C-457)		
Scaling (ASTM C-672)	0.02 kg / m <sup>2</sup>	0.04 lbs / ft <sup>2</sup>
Air (%)	5% - 9%	
Color	Beige	

## PREPARATION

For RS-SCC to adhere to the existing concrete, the surface to be treated must be clean and free from any loose and deleterious material, damaged and unsound concrete, dust, dirt, and any other contaminant that may interfere with bonding of new concrete. The rebar must be clean and free from paint, dust, oil, rust or any other matter. Surfaces must be roughened to ensure proper bonding and saturated immediately with water prior to concreting. All ponded and standing water shall be removed.

(PLEASE TURN OVER)

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## PREPARATION (Continued)

It is recommended to clean the concrete substrate surface with a pressure water jet to remove all contaminants (dust, paint, primer, grease) that may affect the bonding of the product. It is also recommended to use sandblasting. It is recommended to saw cut the perimeter of area to be repaired.

## MIXING

To obtain a slump flow of 60 to 70cm (24 to 28 inches).

Add:

Bag	Minimum	Maximum
30 Kg (66 Lbs)	3.2 Lts (0.85 US Gal)	3.4 Lts. (0.9 US Gal)
22.7 Kg (50 Lbs)	2.3 Lts (0.6 US Gal)	2.6 Lts. (0.7 US Gal)

The use of a concrete mixer is recommended. The equipment must be clean and cannot contain any dry or humid residue of cement. Add 80 % of the water before slowly adding the product to the mixer. Then, add the rest of the water. Mix for one minute. Pause for one minute and remix for one more minute or until a homogenous mix and proper slump flow is obtained.

## PLACING

Simply pour the flowable concrete mix in forms or area of repair. Ensure adequate mixing capacity and mixing and placing crews are available as material has short working time and cold joint may occur if placing is delayed and not continuous. In warm weather, use ice water and/or retarder to retard setting. Consult Ambex Technical Personnel for use of a retarder admixture. Trowel finish surfaces. Pumping RS-SCC is not recommended due to short working time.

## CURING

Water cure the surface. Use of wet burlap covered with 6-mil plastic sheet is recommended for 3 hours.

## PACKAGING

30 kg bag (66 lbs. bag) 63 bags per skid  
22.7 kg bag (50 lbs bag) 64 bags per skid

## STORAGE

Cementitious material sensitive to humidity.

Store in a dry area.

Shelf life 1 year if properly protected.

## SAFETY PRECAUTIONS

This product contains cement and is alkaline when mixed with water. It may irritate skin and eyes. Avoid splashing and contact with skin. If material is in contact with skin or eyes, rinse with water and consult a doctor if irritation persists. Do not rub eyes. Do not swallow. Wear adequate protective wear. MSDS available on request

## CLEANING

Clean tools and equipment with water immediately after use.

## WARNING

Do not modify or add admixtures without consulting Ambex Technical Representative.

## GUARANTEE

Ambex Concrete Technologies Inc. (Ambex) guarantees that its products meet the technical specifications presented on its data sheets. The products must be used as per directions stated on data sheets. Ambex is not responsible for any damages resulting from improper use and application of its products. Ambex's liability is limited to the replacement only of product considered defective. Ambex does not give any other warranty, implicit or explicit, and in no way can be held responsible for loss of profits, demands from third parties or any other damages.

## TECHNICAL SERVICE

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