



**AMBEX RAPID-SETTING
SELF-CONSOLIDATING
CONCRETE**

RS-SCC™

RS-SCC™ TECHNICAL INFORMATION

DESCRIPTION

AMBEX RS-SCC™ is a mix of rapid setting cement, quality stone and sand combined with selected admixtures.

AMBEX RS-SCC™ is premixed and is available in bags. It is ready to use simply add water and mix.

AMBEX RS-SCC™ will produce an ultra high early strength concrete which 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. It contains an air entrainment admixture to ensure freeze thaw and scaling resistance and meets ASTM C-666 freeze-thaw durability and ASTM C-672 scaling tests. No chlorides are added. It contains 10 mm (3/8 inch) minus coarse aggregate and should not be used in thin featheredge applications. Sand and stone free of ASR. No external vibration is required.

APPLICATIONS

AMBEX RS-SCC™ can be used for repair and rehabilitation of concrete structures, pavements and bridge decks, joints, bearing pads, machine bases, industrial floors and plant repairs where a quick turnaround time is required and shut down time is critical.

AMBEX RS-SCC™ can be mixed with latex to obtain a highly resistant topping for flooring repairs. Ideal for interior or exterior applications.

PREPARATION

For **AMBEX RS-SCC™** to adhere to the existing concrete, the existing surface must be clean and free from any loose and deleterious material, damaged and unsound concrete, asphalt, paint, 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 contaminants and be properly attached in place. Saw cut perimeter of repair area. Clean the concrete surface with a high pressure water jet (3000 psi). **Surfaces must be roughened and saturated with water prior to concreting to ensure proper bonding. All ponded and standing water shall be removed prior to concreting.**

TECHNICAL SPECIFICATIONS

	METRIC	IMPERIAL	
Yield 30 kg (66 lbs) Bag	0.014 m ³	0.5 pi ³	
Aggregate Size	2.5 – 10 mm	1/8 – 3/8 in	
Set Time (ASTM C191-92)	21° C	70° F	
<i>Initial Set Time:</i>	20 min.		
<i>Final Set Time:</i>	45 min.		
Sump Flow (CSA A23.2-5 C)	600 – 700 mm	24 – 28 in	
Comprehensive Strength (ASTM C- 39)	3 hrs:	35 MPa	5080 psi
	24 hrs:	42 MPa	6090 psi
	7 days:	51 MPa	7400 psi
	28 days:	55 MPa	7980 psi
Flexural Strength (ASTM C- 348)	24 hrs:	9.3 MPa	1300 psi
	7 days:	10.6 MPa	1500 psi
Substrate Bonding (ASTM C- 882)	24 hrs:	25.1 MPa	3640 psi
	7 days:	25.5 MPa	3700 psi
Pullout (ASTM C- 1583)	28 days:	≥4.1 MPa	≥600 psi
Freeze-Thaw Durability (ASTM C- 666) (312 cycles)		100%	
Air Void Spacing Factor (ASTM C- 457)	196µm	7.71 x 10 ⁻³ in	
Scaling Resistance (ASTM C- 672)	0.02 kg / m ²	0.004 lbs / ft ²	
Air Content		5% – 9%	
Color		Beige	
Temperature Application	5° C – 30° C	40° F – 86° F	

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AMBEX RAPID-SETTING SELF-CONSOLIDATING CONCRETE - RS-SCC™

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MIXING

BAG WEIGHT	QUANTITY OF WATER
30 kg (66 lbs)	3.2 L – 3.4 L (0.85 – 0.90 US Gal)

The use of a concrete mixer is recommended. The equipment must be clean and cannot contain any dry or wet cement or concrete residue. Start mixer and add 80% of the water before slowly adding **AMBEX RS-SCC™** in the mixer. Mix for one minute. Pause for 30 seconds so admixtures may react with water. Add rest of water and remix for one more minute or until a homogenous mix and proper slump flow is obtained. Mixing time may vary with temperature and equipment used. **Too much water may cause rheological instability (segregation or/and excess bleeding) and may affect properties.**

PLACING

Simply pour the flowable **AMBEX RS-SCC™** in forms or on areas 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. Formwork and concrete must be saturated prior to placing of **AMBEX RS-SCC™**. Place **AMBEX RS-SCC™** when temperature is above 5°C (40°F). 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 **AMBEX RS-SCC™** is not recommended due to short working time. No external vibration is required.

CURING

Water cure the surface. Use of pre-saturated wet burlap covered with 6-mil plastic sheet is recommended for a minimum of 2 hours for horizontal surfaces

PACKAGING

30 kg (66 lbs) 63 bags per pallet

1000 kg (2,206 lbs) Supersac available

STORAGE

Cementitious material sensitive to humidity

Store in a dry area

Shelf life: 1 year if properly protected

PROBLEMATIC SITUATIONS

Cold or hot weather concreting without adequate protection

Adding admixtures without authorization

Adding aggregate

Adding excess water

SAFETY PRECAUTIONS

This product contains Portland 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. Material Safety Data Sheets 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

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TECHNICAL SERVICE

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