Application Instructions: ARC 791

General Instructions

- Proper surface preparation is critically important for the long term performance of the ARC 791 system.
- The prepared concrete surface must be structurally sound, with contaminants thoroughly removed and roughened to > an ICRI CSP 3 profile (similar to #60 grit sandpaper finish). With ARC 797 Primer, the surface may be damp, but not wet i.e. no free standing water.
- A **vapor barrier** is required for *slab-on-grade* applications. If no vapor barrier is present, it is essential to check for vapor transmission.
- For detailed information on surface preparation and application, please contact your ARC specialist or ARC Application Engineering.

Surface Cleaning and Profiling Methods

Hydro-blasting	Scarifying	Scabbling
Steel shot-blasting	Dry abrasive blasting	Grinding

Specific to Old Concrete:

Remove all surface contaminants thoroughly, including:

Old coatings	Dust	Laitance
Soluble salts	Loose concrete	Hydrophobic Contaminants

Remove grease, oils, and grime by washing the concrete surface with an emulsifying alkaline, water-base cleaner; rinse thoroughly.
Employ one or more of the Surface Cleaning Methods listed above.

Specific to New Concrete

Allow a minimum of 28-day cure of new concrete before preparation.
Employ one or more of the Surface Cleaning Methods listed above.

ARC 791 System Kit: Mixing

ARC 797 Primer System Kit: Mixing and Application

Step-1 (Mixing)

- Each system kit contains a 2-component primer (ARC 797).
- The Primer kit is of pre-measured Part-A & Part-B in proportion as per the correct product mix ratio.
- Add Part-B to Part-A, and mix thoroughly, until clear.

Step-2 (Application)

- Apply the Primer uniformly to a wet film thickness of 175-250 µm (7-10 mil), using a brush, roller, squeegee or spray to the freshly prepared concrete surface. Do not allow pooling of primer to occur
- Do not prime more surface area than can be top coated within 4 hours, depending on ambient conditions.
- For vertical substrates and applications where concrete is very porous, it may be necessary to double prime the area by applying two coats as wet-on-wet.
- Apply all mixed primer before end of working time based on the chart below.

To reduce the chance of vapor blistering or disbondment, the overlayment should not be installed while the concrete's temperature is rising. In outdoor applications, it is best to install in the evening or at night to avoid this problem.

Coverage/Spreading

ARC 791 is available in two package sizes—A System Kit covering 4.10 m^2 (44.13 $ft.^2$) and a Bulk Kit covering 16.70 m^2 (180 $ft.^2$). Each kit contains an ARC 797 primer pack, ARC 791 resin pack and requisite bags of the QRV reinforcement.

Working Time-Minutes

	10°C	16°C	25°C	32°C
	50°F	60°F	77°F	90°F
ARC 797 Primer	65 min.	40 min.	30 min	18 min.
ARC 791	2 hrs.	70 min.	50 min.	35 min.

'Working Time' begins when mixing is initiated.

ARC 791 Top Coat: Mixing

- To facilitate ease of mixing and application, all material temperatures should be between 21°-32°C (70°-90°F) prior to mixing.
- ARC 791 should be applied shortly after application of 797 primer. The primer must still be tacky prior to applying ARC 791; otherwise the area must be reprimed. This is optimally within 4 hours of application, depending on ambient conditions.
- Premix Part A to disperse pigments. Thoroughly mix Top Coat Part A and Part B in a suitable pail, using a slow speed mixer.
- Next, transfer the blended resins to an epoxy mortar mixer containing one bag of QRV and gradually add in remaining 2 bags of QRV reinforcement. Total mixing time should be a minimum of 3 minutes or until uniformly blended.
  NOTE: For the System Kit 1A + 1B + 3 bags of QRV reinforcement will require a mixer suitable to handle a 35 liter (1 1/4 $ft.^3$) mix.

The minimum application temperature is 10°C (50°F), although application will be easier at 25°C (77°F).

ARC 791 Top Coat Application

- The mixed ARC 791 may be distributed on the floor surface using screed guides and rigid bar, or screed box, not exceeding 1.2 m (3.93 ft) wide.
- Apply a minimum of 6 mm (240 mil) and finish the surface using steel trowels.
- **IMPORTANT**: During application, press ARC 791 firmly on to the substrate to promote contact with the primer and to ensure thorough compaction. Trowel-finish the surface to a smooth closed surface texture.
- Remove all trowel marks and unevenness before the end of "Working Time"(see chart).
- All non-moving horizontal cracks must be pre-filled with ***ARC 797*** and fiber mesh. All vertical cracks must be pressure injected with a suitable injection system. All pre-existing joints must be respected.
- Prior to its light load cure state, ARC 791 may be overcoated with any of the ARC epoxy materials with the exception of ARC vinyl ester based coatings.

Curing Schedule

	10°C	16°C	25°C	32°C
	50°F	60°F	77°F	90°F
Foot Traffic	16 hrs	9 hrs	6 hrs	4.5 hrs
Light Load	24 hrs	19 hrs	11 hrs	8.5 hrs
Full Load	72 hrs	42 hrs.	24 hrs	19 hrs.
Full Chemical	19 days	13 days	7 days	5 days

Cure times based on substrate temperature at DFT of 6 mm (240 mil). Thicker films will cure more rapidly.

ARC 791 Bulk Kit: Mixing

Please follow the above instructions but for specific mix ratios by weight and by volume refer to the ARC 791 Bulk Kit packaging mix instructions (provided separately with Bulk Kit package).

Clean Up

Use commercial solvents (Acetone, Xylene, Alcohol, and Methyl Ethyl Ketone) to clean tools immediately after use. Once cured, the material would have to be mechanically abraded.

Storage

The recommended storage temperature is between 10°C (50°F) and 32°C (90°F). Intermittent deviations from this range which may occur during shipping are acceptable as long as the material is pre-warmed to room temperature before use. The shelf life is two years in unopened containers. Mix each liquid component well before using.

Safety

Before using any products, always review the appropriate Safety Data Sheets (SDS) or appropriate Safety Sheet for your area. Follow standard confined space entry and work procedures, if appropriate.

Shelf life (in unopened containers): 3 years [when stored between 10°C (50°F) and 32°C (90°F) in dry, cool, covered facility]

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Application condition may influence the outcome of the coating. For specific guidance concerning local condition for surface preparation, please contact ARC Application Engineering at (781) 438-7000.

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