

Surface Preparation, Mixing and Application Instructions General Instructions

Proper surface preparation is critically important for the long-term performance of the ARC SL-E system.

The prepared concrete surface must be structurally sound, with contaminants thoroughly removed. Surface dampness is acceptable; standing water is not. For slab on grade applications, a vapor barrier is recommended.

The surface must be structurally sound and roughened to an >ICRI CSP 3 profile (similar to #60 grit sandpaper).

If no vapor barrier is present, check for vapor transmission.

For detailed information on surface preparation and application, please refer to *ARC Application Procedures for Concrete* or contact your ARC specialist.

Surface Cleaning and Profiling Methods

Hydro-blasting	Grinding
Steel shot-blasting	Dry abrasive blasting

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-based cleaner; rinse thoroughly.

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 SL-E: Mixing

To facilitate mixing and application, material temperatures should be between 21°C – 32°C (70°F – 90°F). Each kit is packaged to the proper mix ratio. If further proportioning is required, the kit should be divided according to the correct mix ratio.

Mix Ratio	By Weight	Volume
A : B	3.3 : 1	2.5 : 1

Prior to mixing ARC SL-E, pre-mix Part A to suspend any settled reinforcements.

Power mixing should be accomplished with a variable speed, high torque, low speed mixer with a non-air entraining mix blade such as a “Jiffy” blade.

Do not mix more product than can be applied within the stated working time.

ARC SL-E: Application

ARC SL-E may be applied by notched squeegee, brush, or roller using a lint free short nap roller such as mohair.

When applying ARC SL-E the following conditions should be observed: Film thickness range per coat 250 µm (10 mil) – 375 µm (15 mil)

Application temperature range 10°C (50°F) – 35°C (100°F) (substrate).

For maximum protection against immersion or spills, a minimum 2 coat system is recommended.

Multiple coat applications of ARC SL-E may be accomplished, without additional surface preparation, if the film is free of contamination and has not cured beyond the stage stated as Light Load in the Curing Schedule chart below. If this period is exceeded, light abrasive blasting or sanding is required followed by removal of abrasive residues. Prior to its light load cure state, ARC SL-E may be over coated with any of the ARC epoxy materials with the exception of ARC vinyl ester based coatings.

ARC SL-E Installation Instructions with Silica Flour

Before reaching its light load state, ARC SL-E may be over coated

ARC SL-E with Silica Flour: Mixing

To facilitate mixing and application, material temperatures should be between 21°C – 32°C (70°F – 90°F). Each kit is packaged to the proper mix ratio. If further proportioning is required, the kit should be divided according to the correct mix ratio.

Mix Ratio by Weight 3.3 :1, Volume 2.5:1

Silica Flour addition: 50 lbs (22.7 kg) per 3 gallons (11.4 liters) of epoxy liquids prior to mixing ARC SL-E, pre-mix Part A to suspend any settled reinforcements.

Power mixing should be accomplished with a variable speed, high torque, low speed mixer with a non- air entraining mix blade such as a “Jiffy” blade. Do not mix more product than can be applied within the stated working time.

Mix Part A and Part B until uniform in color, then slowly add the silica flour.

ARC SL-E with Silica Flour Application

ARC SL-E with silica flour can be applied by a gauge rake, or notched squeegee followed by a spike roller after 5 – 10 minutes to remove any bubbles in the surface.

When applying ARC SL-E with silica flour the following conditions should be observed: Film thickness per coat is approximately 3/16" (4.7 mm).

Application temperature range 10°C (50°F) – 35°C (100°F) (substrate)

Prior to its light load cure state, ARC SL-E with silica flour may be over coated with any of the ARC epoxy materials with the exception of ARC vinyl ester based coatings, if desired.

Coverage/Spreading for ARC SL-E with Silica Flour

Unit Size	Coverage at 3/16"
14 gallon (53 liter)	196 ft ² (18.2 m ²) – 201 ft ² (18.7 m ²)
3 gallon (11.3 liters)	42 ft ² (3.9 m ²) – 43 ft ² (4 m ²)

ARC SL-E with Washed Silica Broadcast

A slip resistant surface can be created by broadcasting silica sand (size 45 – 55) onto the thin film low viscosity variant and the silica flour added variant. For both applications broadcast the silica sand to rejection on the wet surface. Allow to dry, then sweep off the excess. If desired you can apply a, 25 mm (10 mil) sealer coat of SL-E (Parts A and B only) with a flat squeegee or short nap roller to ease claning operations.

Coverage/Spreading

Thickness	Unit size	Coverage
500 µm (20 mil)	3 gal (11.3 liter)	22.6 m ² (243.3 ft ²)
	14 gal (53 liter)	106 m ² (1141 ft ²)

Working Time-Minutes

	10°C	16°C	25°C	32°C
	50°F	60°F	77°F	90°F
3 gal (11.3 liter)	45	35	20	15

'Working time' begins when mixing is initiated.

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

Curing Schedule (3 gallon/11.3 liter)

	10°C	16°C	25°C	32°C
	50°F	60°F	77°F	90°F
Foot Traffic	16 hrs.	12 hrs.	10 hrs.	6 hrs.
Light Load	36 hrs.	24 hrs.	16 hrs.	9 hrs.
Full Load	64 hrs.	40 hrs.	30 hrs.	20 hrs.
Full Chemical	180 hrs.	140 hrs.	100 hrs.	80 hrs.

Force curing at 65°C (150°F) after material has reached foot traffic will accelerate cure time to 8 hours plus foot traffic time.

Clean Up

ARC SL-E cures to a solid mass in a very short period of time. All clean-up activities must be carried out as soon as possible to prevent material hardening onto the tools. Use commercial solvents (Acetone, Xylene, Alcohol, Methyl Ethyl Ketone) to clean tools immediately after use. Once cured the material would have to be abraded off.

Storage

Store between 10°C (50°F) and 32°C (90°F). Excursions beyond this range which may occur during shipping are acceptable. The shelf life is two years in unopened containers. Settling and reinforcement separation may occur over time or at elevated storage temperatures. Reconstitute prior to use by mixing individual components before mixing Part A with Part B.

Safety

Before using any products, review the appropriate Safety Data Sheet (SDS) or Safety Sheet for your area.

Follow standard confined space and entry work procedures, if appropriate.