Application Instructions: ARC SD4i(E)

Surface Preparation

Proper surface preparation is critical to the long term performance of ARC SD4i(E). The exact requirements vary with the severity of the application, expected service life, and initial substrate conditions.

Optimum preparation will provide a surface thoroughly cleaned of all contaminants and roughened to an angular profile between 75-125 µm (3-5 mil). This is normally achieved by initial cleaning and degreasing and then abrasive blasting to a cleanliness of ***White Metal (Sa 3/SP5) or Near-White Metal (Sa 2.5/SP10)*** followed by removal of all abrasive residues.

Mixing

To facilitate mixing and application, material temperature should be between 21°C– 35°C (70° – 95°F). Each kit contains two pre-measured components in proportion as per the correct product mix ratio. If further proportioning is required, they should be divided according to the mix ratios:

Mix Ratio	By Weight	By Volume
A : B	2.5 : 1	2.0 : 1

Prior to mixing ARC SD4i(E), pre-mix Part A and Part B separately to suspend any settled reinforcements. When mixing by hand, add Part B to Part A. Mix until product is uniform in color and consistency, with no streaks. Power mixing should be accomplished with a variable speed, high torque, and 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.

Working Time – Minutes

	10°C	16°C	25°C	32°C	This chart defines the practical working time of ARC SD4i(E), starting from when mixing begins.
	50°F	60°F	77°F	90°F	
5 liters	35 min.	30 min.	20 min.	15 min.	
16 liters	25 min.	20 min.	15 min.	10 min.	

Application

ARC SD4i(E) may be applied by airless spray, brush, or roller using a lint free short nap roller such as mohair. When applying ARC SD4i(E) the following conditions should be observed: Film thickness range per coat should be from: 250 µm (10 mil) to 375 µm (15 mil) per coat to avoid sagging on vertical or overhead surfaces. Vertical or overhead applications may result in reduced film thickness. To compensate additional coats may be required.

Multiple coat applications of ARC SD4i(E) may be accomplished without additional surface preparation as long as the film is free of contamination and has not cured beyond the stage stated as Overcoat End in the Curing Schedule chart below. If this period is exceeded, light abrasive blasting or sanding is required to be followed by removal of any abrasive residues. ARC SD4i(E) is normally applied in a minimum of two coats in alternate colors. Application temperature range should be between 10°C (50°F) - 35°C (100°F). SD4i(E) can be applied to a total maximum film thickness of 3.8 mm (150 mil). ARC SD4i(E) may be spray applied by airless spray equipment without solvent dilution; consult ARC Technical Bulletin 006 for equipment guidelines. If using 1125 ml cartridge preheat cartridge to 50°C (120°F) prior to inserting in SULZER MIXPAC® gun. Adjust atomizing and feed air as required to achieve desired spray pattern. Due to high ceramic content in ARC SD4i(E) high wear to pump and wetted parts of airless spray system are to be expected. Prior to its light load cure state, ARC SD4i(E) may be overcoated with any of the ARC epoxy materials with the exception of ARC vinyl ester based coatings.

Coverage

Thickness	Unit size	Coverage
375 µm (15 mil)	1125 ml	3.00 m^2 (32.30 ft^2)
	5 liters	13.33 m^2 (143.52 ft^2)
	16 liters	42.67 m^2 (459.26 ft^2)

Curing Schedule

	10°C *(+/-2°C)*	**16°C** *(+/-2°C)*	**20°C** *(+/-2°C)*	**25°C** *(+/-2°C)*	**32°C** *(+/-2°C)*	Full chemical properties can be achieved rapidly by force curing. To force cure, allow material to reach Tack Free cure stage and heat to 65°C (150°F) for a minimum of 6 hours. Curing at elevated temperatures improves the chemical and thermal resistance of ARC SD4i(E).
	50°F	**60°F**	**68°F**	**77°F**	**90°F**	
Tack Free	6 hrs.	4 hrs.	3.5 hrs.	3 hrs.	1 hr.	
Light Load	24 hrs.	18 hrs.	14 hrs.	10 hrs.	5 hrs.	
Overcoat End	40 hrs.	30 hrs.	25 hrs.	20 hrs.	10 hrs.	
Full Load	60 hrs.	48 hrs.	36 hrs.	24 hrs.	14 hrs.	
Full Chemical	120 hrs.	96 hrs.	72 hrs.	48 hrs.	24 hrs.	

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 abraded off.

Safety

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

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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 +1 (781) 438-7000.

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