

Surface Preparation

Proper surface preparation is critical to the long term performance of ARC S4+. The exact requirements vary with the severity of the application, expected service life, and initial substrate conditions.

All sharp edges and welds shall be ground smooth or to a 3 mm (120 mil) radius before abrasive blasting. 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 optimally achieved by initial cleaning and degreasing; 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°– 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	1.9 : 1	2.0 : 1

Prior to mixing ARC S4+, pre-mix Part A and part B to suspend any settled reinforcements. When mixing small quantities by hand, add Part B to Part A and mix thoroughly until the material is completely mixed, indicated by a homogeneous color with no streaks. Power tool mixing should be done using a variable speed mixer fitted with a non-air entraining mixing tool such as a 'Jiffy' blade. Do not mix more product than can be applied within the stated working time.

Working Time – Minutes

	16°C	25°C	32°C	This chart defines the practical working time of ARC S4+, starting from when mixing begins.
	60°F	77°F	90°F	
5 liters	70 min.	55 min.	45 min.	
16 liters	55 min.	40 min.	35 min.	

Application

ARC S4+ may be applied by spray system, brush, or roller using a lint free short nap roller such as mohair. When applying ARC S4+ the following conditions should be observed: Film thickness range per coat should be from: 375 µm (15 mil) to 500 µm (20 mil). ARC S4+ is normally applied in a minimum of two coats in alternate colors. Application temperature range should be between 16°C (60°F) - 35°C (100°F). ARC S4+ 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 60°C (140°F) prior to inserting in SULZER MixPak® gun. Adjust atomizing and feed air as required to achieve desired spray pattern. When spraying, apply initial pass at 75 -125 µm (3-5 mil). Build successive passes to achieve the first coat recommended thickness. Vertical or overhead applications may result in reduced film thickness. To compensate additional coats may be required. Multiple coat applications of ARC S4+ 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. Prior to its light load cure state, ARC S4+ 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	42.70 m ² (459.30 ft ²)

Curing Schedule

	16°C	25°C	32°C	Full chemical properties can be achieved rapidly by force curing. To force cure, first allow the material to become tack free, and then heat to 65°C (150°F) for a minimum of 12 hours. Curing at elevated temperatures improves the chemical and thermal resistance of ARC S4+.
	60°F	77°F	90°F	
Tack Free	10 hrs.	8 hrs.	5 hrs.	
Light Load	24 hrs.	18 hrs.	13 hrs.	
Overcoat End	28 hrs.	21 hrs.	15 hrs.	
Full Load	52 hrs.	44 hrs.	38 hrs.	
Full Chemical	300 hrs.	250 hrs.	200 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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Shelf life (in unopened containers):
2 years [when stored between 10°C (50°F) and 32°C (90°F) in dry, cool, covered facility]