Application Instructions: ARC S1PW

Surface Preparation

Proper surface preparation is critical to the long term performance of ARC S1PW. 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 (0.125 inch) 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 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-32°C (70°F-90°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	3.0 : 1	2.0 : 1

Prior to mixing ARC S1PW pre-mix Part A and Part B to re-disperse any settled components. When mixing by hand, add Part B to Part A and mix until product is uniform in color and consistency, with no streaks. Power mixing should be accomplished with a variable speed mixer fitted 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 S1PW, starting from when mixing begins.
	50°F	60°F	77°F	90°F	
5 liter	150 min.	130 min.	90 min.	60 min.	
16 liter	95 min.	80 min.	55 min.	40 min.	

Application

ARC S1PW may be applied by spray system, brush, or roller using a lint free short nap roller such as mohair. When applying ARC S1PW the following conditions should be observed: Film thickness range per coat should be from: 250 µm (10 mil) to 375 µm (15 mil). ARC S1PW is normally applied in a minimum of two coats in alternate colors. A maximum of three coats may be applied when requiring certification to NSF Standard 61. Application temperature range should be between 10°C (50°F) - 38°C (100°F). ARC S1PW may be spray applied by plural component airless spray equipment without solvent dilution; consult ARC Technical Bulletin 006 for equipment guidelines.

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.

Service Thickness Conditions	Minimum # of Coats	Recommended Film Thickness per Coat	Recommended Total Film Thickness	**Note:** For complete hiding in a multi-coat application, it is recommended that ARC S1PW be applied to a minimum film thickness of 300 µm (12 mil) per coat.
Atmospheric (Structural Steel)	1	250 – 375 µm (10 – 15 mil)	250 – 375 µm (10 – 15 mil)	
Static Immersion	2	250 – 375 µm (10 – 15 mil)	500 – 750 µm (20 – 30 mil)	

Multiple coat applications of ARC S1PW 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 S1PW 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)
375 µm (15 mil)	5 liters	13.33 m^2 (143.52 ft^2)
375 µm (15 mil)	16 liters	42.67 m^2 (459.26 ft^2)

Curing Schedule

	10°C	16°C	25°C	32°C	***Note:*** Full mechanical 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 4 hours.
	50°F	60°F	77°F	90°F	
Tack free	8 hrs.	7 hrs.	6 hrs.	4 hrs.	
Light Load	36 hrs.	24 hrs.	18 hrs.	12 hrs.	
Overcoat End	44 hrs.	36 hrs.	30 hrs.	24 hrs.	
Full Mechanical	72 hrs.	48 hrs.	36 hrs.	26 hrs.	
Full Chemical	240 hrs.	210 hrs.	168 hrs.	120 hrs.	

Clean Up

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.

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.

Shelf life (in unopened containers): 1 year [when stored between 10°C (50°F) and 32°C (90°F) in dry, cool, covered facility]

A.W. Chesterton Company
860 Salem Street, Groveland, MA 01834 USA

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.

085560
4/17

CHESTERTON Global Solutions, Local Service.