

Surface Preparation

Proper surface preparation is critical to the long term performance of ARC S5. 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 20° – 35°C (68° – 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	16.8 : 1	8.8 : 1

Add Part B to Part A and mix thoroughly. Continue until the material is completely mixed.

Application

Coverage with Solvent/without Solvent

Thickness	Unit Size	Coverage
750 µm (30 mil)	5 liter	6.67 m ² (71.76 ft ²)
	16 liter	21.33 m ² (229.63 ft ²)

Spray Application

For spray applications it is required to add 9 – 13% by volume of methyl ethyl ketone (MEK) in the following amounts:

5 Liter Kit – 14 fl.oz – 22 fl.oz (0.43 L – 0.65 L)

16 Liter Kit – 47 fl.oz – 70 fl.oz (1.39 L – 2.08 L)

Spray applications, with solvent, will require two coats to achieve the recommended film thickness of 30 mils (750 µ). Please consult *ARC Technical Bulletin #6 Spray Equipment Guidelines* for suitable equipment. Please review the overcoat guidelines below:

Working Time – Minutes

With Solvent (MEK)	10°C	16°C	25°C	32°C	This chart defines the practical working time of ARC S5 with solvent, starting from when mixing begins.
	50°F	60°F	77°F	90°F	
5 liter	147 min	126 min	95 min	63 min	
16 liter	126 min	105 min	74 min	47 min	

The recommended ambient application temperature range for ARC S5 is 10°C – 35°C (50°F – 95°F).

Curing Schedule with MEK (Spray Application)

	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 70°C (158°F) for 6 hours. In dynamic flow and abrasion conditions (wet or dry), ARC S5 must be post cured at 95°C (203°F) for 12 hours prior to use.
	50°F	60°F	77°F	90°F	
Tack Free	10 hrs	8 hrs	6 hrs	4 hrs	
Overcoat Begin	6 hrs	4 hrs	3 hrs	2 hrs	
Overcoat End	10 hrs	8 hrs	7 hrs	5 hrs	
Full Service	6 days	5 days	4 days	3 days	

Manual Application

ARC S5 can be manually applied by brush or low nap rollers. The minimum recommended total dry film thickness of ARC S5 is 30 mils (750 µ) which can be achieved manually in single coat without solvent. For applications where a second coat is desired ARC S5 must be brush blasted (or similar) prior to overcoating. Please see curing schedule to select the time frame to prepare the base coat prior to applying the topcoat.

Working Time – Minutes

	10°C	16°C	25°C	32°C	This chart defines the practical working time of ARC S5 without solvent, starting from when mixing begins.
	50°F	60°F	77°F	90°F	
5 liter	140 min	120 min	90 min	60 min	
16 liter	120 min	100 min	70 min	45 min	

Curing Schedule

	10°C	16°C	25°C	32°C	<p>Note:</p> <p>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 70°C (158°F) for four hours. In dynamic flow and abrasion conditions (wet or dry), ARC S5 must be post cured at 95°C (203°F) for 12 hours prior to use.</p>
	50°F	60°F	77°F	90°F	
Tack Free	10 hrs	8 hrs	6 hrs	4 hrs	
Brush blast beginning for second coat	48 hrs	36 hrs	24 hrs	20 hrs	
Full service	5 days	4 days	3 days	2 days	

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.

Shelf life (in unopened containers): 2 years [when stored between 10°C – 32°C (50°F – 90°F)] in dry, cool, covered facility.