# Application Instructions: ARC I BX1

## Surface Preparation

Proper surface preparation is critical to the long term performance of this product. 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

ARC IBX1 is supplied in a resealable crimped 20 L metal container with a nesting insert containing the Part B curing agent on top, with the part A resin below.

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

| Mix Ratio | By Weight |
|---|---|
| A : B | 2.6 : 1 |

When mixing with the enclosed tool, place both components onto a clean, dry, non-porous surface (usually plastic). Begin mixing with the enclosed tool using a figure eight pattern, periodically scraping the mixing surface and tool to insure no unmixed residue remains on either surface. Continue until the material is completely mixed, indicated by a homogeneous color with no streaks.

If mixing by power tool, place both components in the Part A container, and mix at a low speed until a homogeneous color is achieved. To assure complete mixing, finish blending by hand as described above.

## Working Time – Minutes

| | 16°C | 25°C | 32°C | 43°C | This chart defines the practical working time of ARC I BX1, starting from when mixing begins. |
|---|---|---|---|---|---|
| | 60°F | 77°F | 90°F | 110°F | |
| 20 kg | 60 min. | 35 min. | 20 min. | 15 min. | |

## Application

ARC I BX1 must be applied at a minimum thickness of 6 mm (240 mil). Minimum application temperature is 10°C (50°F). In certain applications requiring additional support, it may be advantageous to weld expanded metal mesh onto the metal substrate prior to application of the ARC I BX1. Using the enclosed plastic application tool or trowel: press the material into the surface profile to completely wet out the surface for proper adhesion. Once the material is placed, it may be smoothed utilizing a variety of methods.

Prior to its light load cure state, ARC I BX1 may be overcoated with any of the ARC epoxy materials with the exception of ARC vinyl ester based coatings. If it has cured to the point of “Light Load” described below, the surface should be roughened and dust or other contaminants removed prior to top coating. Prior to curing to “Light Load” no surface preparation is required so long as the surface has not been contaminated. If required, ARC I BX1 can be ground using a rotary grinding tool or machined with polycrystalline diamond tools.

| Thickness | Unit size | Coverage |
|---|---|---|
| 6 mm (240 mil) | 20 kg | 1.39 $m^2$ (14.93 $ft^2$) |
| | | |

## Curing Schedule

| | 16°C | 25°C | 32°C | 43°C |
|---|---|---|---|---|
| | 60°F | 77°F | 90°F | 110°F |
| Tack Free | 7 hrs. | 4 hrs. | 2 hrs. | 30 min |
| Light Load | 24 hrs. | 8 hrs. | 6 hrs. | 90 min. |
| Full Load | 48 hrs. | 30 hrs. | 20 hrs. | 12 hrs. |
| Full Chemical | 72 hrs. | 36 hrs. | 30 hrs. | 24 hrs. |

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 70°C (158°F) for 4 hours.

## 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): 2 years [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.

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