

ARC – Acrylic Resin Composite

ARC (Acrylic Resin Composite) is supplied as two components, a water-based eco acrylic liquid, and a mineral powder base. The system is suitable for a wide range of casting and moulding applications including decorative cast objects, rigid moulds, and many other moulding projects.

Characteristics

- Measure by weight 2.5:1
- Very low shrinkage
- Fast Demoulding
- Quick hardness
- Impact resistant
- High temperature resistance

Typical Applications

- Homewares
- Various mould forming
- Candle Holders
- Artistry Sculptors
- Resin mould forming
- Internal Décor
- Prototyping
- Furniture

Physical Properties	Base	Liquid
Form	Mineral Powder	Acrylic Emulsion
Colour	White to off white	White
Density @ kg/m ³	2.65 – 2.96	1.00 - 1.05
Shelf Life	12 months	12 months

Product information

Mixing Ratio – by Weight	250 parts base : 100 parts liquid
Ideal pouring temperature	20 - 25°C
Potlife / Working time	20 mins*
Cure Time / Demould @ 25°C	35 - 40 mins
80% Full Cure	8 – 10 hours
Full Cure	6 - 8 days
Decomposition Temperature	>1400°C
Cured Hardness, Shore D @ 28 days	81 - 86
Dry Compression Strength @ 8 hours	25 – 30 mPa
Dry Compression Strength @ 28 days	45 – 50 mPa

*Note – Subject to weather, humidity, mass and other unforeseen factors.

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Application

Weigh out ARC powder & liquid, at a mixing ratio of 2.5 parts powder to 1 part liquid. Refer to our calculator online if needed. Pour approx. 80% of the liquid into the powder, mix slowly until a thick paste forms, ensuring its smooth & free of lumps. Scrape sides & base of container. Pour the remainder of the liquid, and mix until a uniform mixture is achieved. Divide into smaller cups, and add ARC pigments to the mixture. Start with a couple of drops and increase as desired, without exceeding a 2% of total weight. Pour the mixture into the mould in your chosen design. Gently tap the sides of the mould, whilst the mixture is still liquid. This will aid in releasing unwanted bubbles. Leave your project to set for 40 minutes, in a cool dry area. Time to demould your ARC project! Once you have taken it out of the mould, it will require 8-10hrs to gain 80% of its strength. ARC will continue to harden while all the moisture evaporates out of the casting, full hardness achieved in 6-8 days.

Cautions

- ARC is measured by weight; it is essential to use accurate scales and suitable mixing tools to ensure that the compound performs within its specification.
- Ensure a clear and safe working environment, solvent-based chemicals are not to be used within work area.
- Pot life starts once liquid is added to powder base, worktime is 20mins +/- 2mins at 25c.
- Other mixing ratios from 2.5:1 to 3:1 can be used if faster curing or a thicker medium is required.
- Adjustments can be made to the ratio to accommodate for sand, stone, metal and other fillers.
- Ideal temperature between 20 - 25c with less than 80% humidity.

Storage

Liquid container should be sealed tight after every use this will prevent liquid evaporation and skin forming, freezing must be avoided. Liquid to be stored at a constant temperature between 5-30c and used within 12 months from purchased date.

Base container should be sealed tight after every use this will prevent moisture in the powder base, store in dry area between 5-30c and used within 12 months from purchased date.

Safety

Please refer to the Materials Safety Data Sheet before use, and for more information.

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