

# JESMONTE<sup>®</sup>

MADE FROM



## AC300 User Guide

Kind to  
Self  
Others  
Planet

# What is Jesmonite AC300



Jesmonite AC300 is a cost-effective alternative to AC100, designed for applications where the high performance of AC100 isn't needed.

It comes in two parts: a water-based acrylic liquid and a mineral base. AC300 contains less acrylic resin than AC100, making it a more economical option for projects that don't require long-term outdoor durability.

It's suitable for a variety of applications, such as decorative castings, rubber mould support cases, and coating polystyrene or foam. AC300 is best for indoor use, but it can be used outdoors for short-term projects like exhibitions and props, with a sealer or paint to protect the surface.

Project specific advice can be obtained by emailing our technical department: [Support@jesmonite.co.uk](mailto:Support@jesmonite.co.uk)

# Preparation

It is essential to use both accurate scales and a Jesmonite High-shear Mixing Blade to ensure that the compound performs within its specification.

Failure to follow these instructions can lead to strength loss, slow cure, and reduced durability. Workshop conditions should be warm, dry, and out of direct sunlight.

Environments where solvent-based compounds are in regular use should be avoided. Mixing containers should be clean and dry, and of a suitable size.



# Mix ratios

**The standard mix ratio for AC300 is as follows:**

AC300 Liquid:  
1 part by weight.

AC300 Base:  
2.5 parts by weight

## **How much will i need?**

For casting every 1,000ml of mould volume will require 1,750g of mixed Jesmonite AC300. For laminating you will need 1,750g/mm of laminate thickness, for each square metre.

A typical laminate will therefore need 2.5kg of Gel Coat mix and 8.5kg of backing mix to create a 6mm glass reinforced laminate. 1,750g Jesmonite AC300 = 1000ml. By volume 1m<sup>2</sup> Laminate = 10kg – 12kg Jesmonite AC300

# Mixing and additives

## Mixing Jesmonite:

To mix Jesmonite AC300, use a Jesmonite High-shear Mixing Blade attached to a drill with variable speed. Slowly add the Base to the Liquids while mixing on low speed. Once most of the powders are mixed in, increase the speed to around 1,000 rpm for 30-45 seconds, or until the mix is smooth and lump-free.

## Using Retarder:

Add Retarder to the pre-weighed liquids to extend the working time. Typically, use 2g-8g, but it's best to do a small test, as the amount needed depends on the temperature and mix size.

## Using Thixotrope:

Add Thixotrope to thicken the mix to a gel-like consistency, useful for brushing or spraying on vertical moulds. Add it after the powders and mix it in using the High-shear Mixing Blade. Add 2g-6g per kilo of mix, adjusting until the right thickness is achieved.



# Pigments



## Adding Pigments:

Jesmonite offers a range of pigments to colour AC300. Add pigments to the AC300 Liquids by weight before mixing in the Base. Use up to 2% pigment by weight (20g per kilo of total mix). For lighter colours, use less pigment. Scales with 1g increments are important for accuracy. Mix different pigments to create custom colours.

**Note:** AC300 will have less vivid colours than AC100 due to its lower acrylic resin content. Also, the Jesmonite Base can vary slightly in colour, so consider this for very pale objects.

# Casting and Curing

For simple cast, pour a small amount of the mix into the mould with a brush, coat all accessible surfaces with material to help reduce air bubbles. If access is difficult then rotate the mould so that the mix flows over the surface. Gentle tapping will also help ensure that air rises to the back of the cast.

Jesmonite AC300 is water-based and needs excess water to evaporate for full strength. Be careful when removing items from the mould, as they can break under strain. Use soft, flexible rubber moulds for delicate objects. After de-moulding, place items in a warm, dry area. Full strength is reached in 24–48 hours, depending on thickness. Ensure air can circulate around the objects, and avoid placing them on plastic until all moisture has evaporated to prevent staining.



# Laminating

## Laminating with Quadaxial Glass Reinforcement:

Jesmonite AC300 can be used with Quadaxial Glass for strong, lightweight laminated panels. Start by preparing your materials: pre-weigh the mix and cut the glass to fit the mould. Apply a 1mm–2mm Gel or Mist Coat to the mould, using a brush or spray gun. Let it dry until touch-dry.

For each mm of laminate thickness, use about 1.75kg per square meter. Typical laminates should be 5mm–6mm thick, weighing 10–12kg/m<sup>2</sup>. Apply a thin layer of material over the Gel Coat, then place the first layer of Quadaxial Glass onto the fresh mix. Pour more material over the glass and work it in with a brush or roller.

Next, mix in 3%–5% of 13mm Coarse Chopped Strands, and spread this onto the mould for an even layer (3mm–5mm). This acts as a spacer, improving strength. Place the second layer of Quadaxial Glass, and brush through the material to wet it fully.

Leave the panel in the mould for 45 minutes to 1 hour. For flat panels, add a vertical edge of at least 35mm and reinforce with ribs made from polystyrene or fire-resistant foam in public areas.



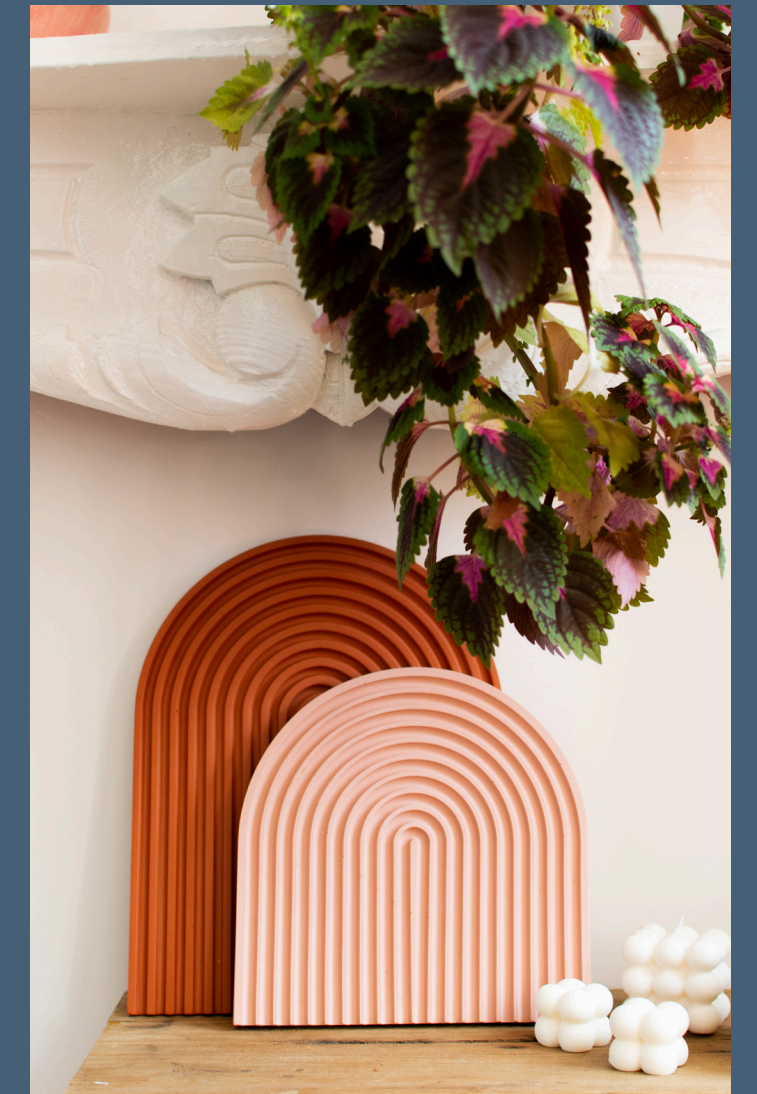
# Finalising

## Surface finish

Jesmonite AC300 contains a high quality pure acrylic resin that can be polished with a clean cotton cloth. Excellent results can be achieved with a wide range of waxes and polishing machinery, and Jesmonite AC300 is also compatible with a wide range of water-based sealers and varnishes.

## Storage

As a basic rule liquid containers should be kept well sealed to prevent water evaporation and skin forming, freezing must be avoided. They should be stored at a constant temperature between 5 – 25°C and Base should be kept dry and stored at 5 – 25°C.



# Contact Information

Jesmonite® Is A Registered Trademark The above information and recommendations are based upon our experience and are offered merely for advice. They are offered in good faith but without guarantee, as conditions and methods of use are beyond our control. it remains the responsibility of the end user to determine the suitability of the materials for the particular purpose intended.

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