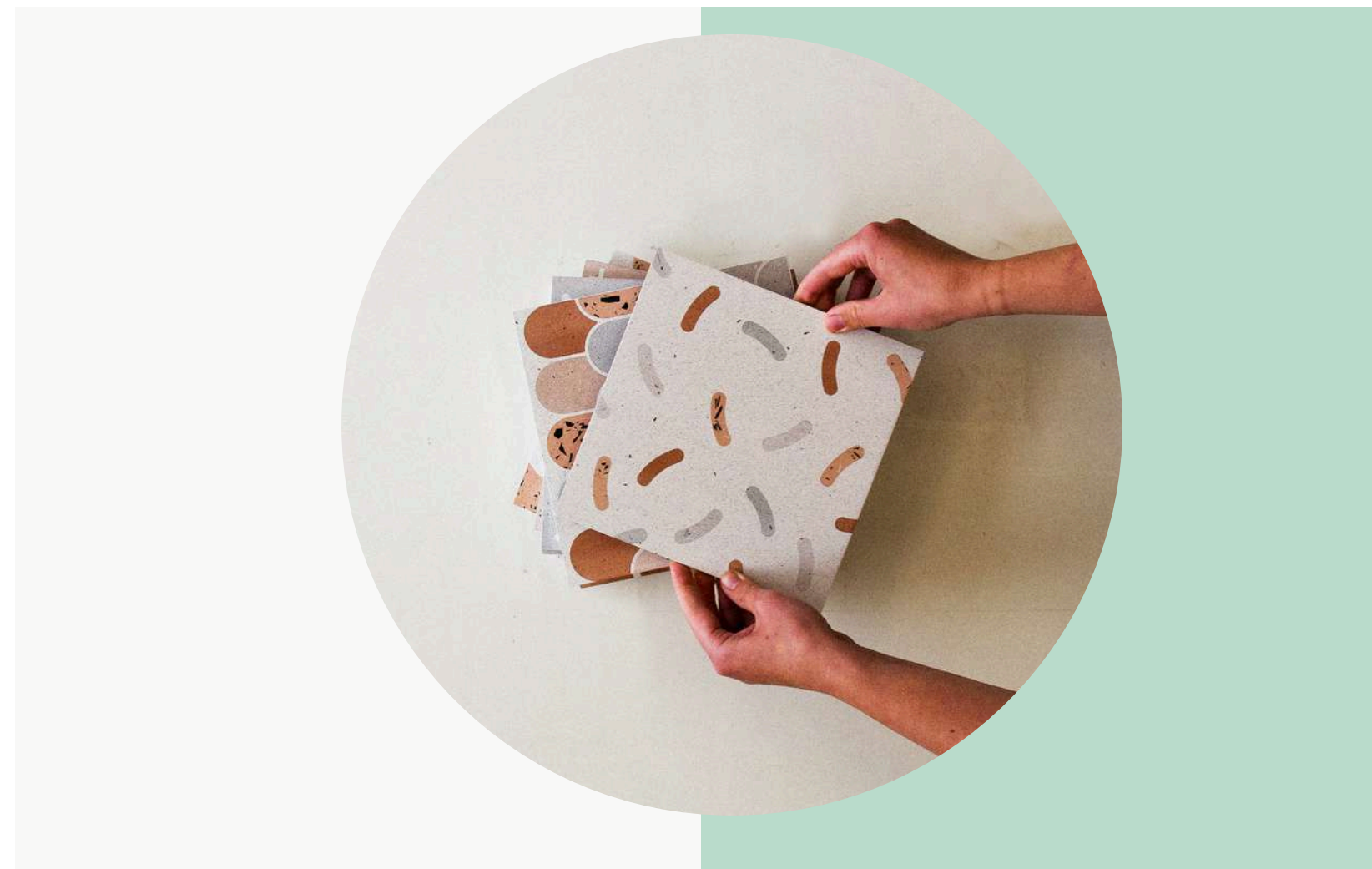


JESMONITE[®]

MADE FROM



AC730 User Guide



What is Jesmonite AC730



Jesmonite AC730 is supplied as two components, a water-based acrylic liquid, and a blended base. It is formulated for external use and contains a blend of decorative aggregates and pigments to achieve a range of stone finishes. It can be used in design, casting, moulding, and producing decorative items with a smooth and refined finish.

Jesmonite AC730 is a high-performance, versatile, and environmentally friendly material, like other Jesmonite products, it combines a water-based acrylic resin with a mineral base, offering excellent durability and aesthetic flexibility.

Project specific advice can be obtained by emailing our technical department: Support@jesmonite.co.uk

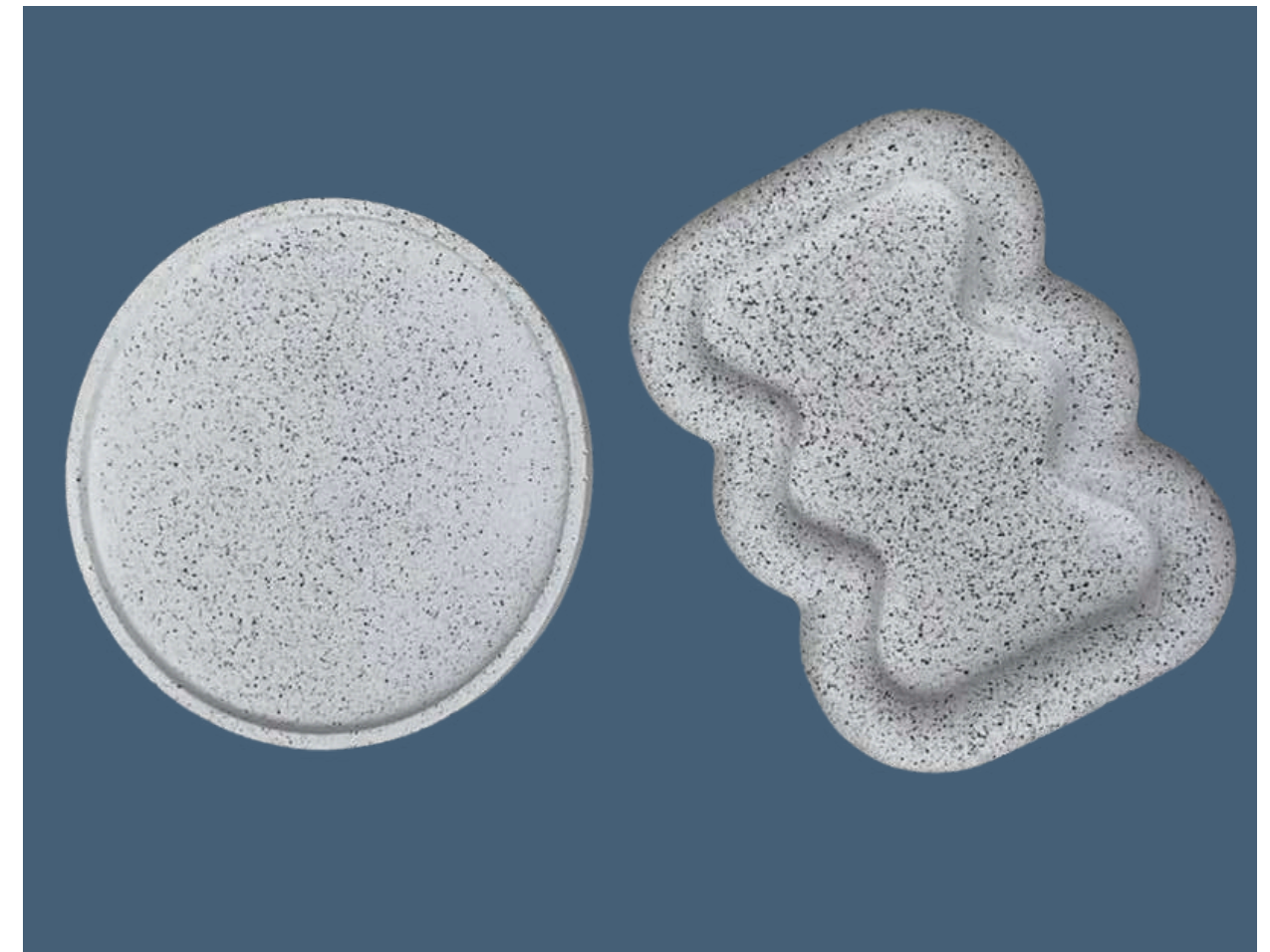
Preparation

To make sure Jesmonite works properly, use accurate scales and a Jesmonite High-shear Mixing Blade. Not doing this can cause the material to lose strength, shrink, and become less durable.

Work in a warm, dry area, and keep it out of direct sunlight. Avoid places where solvent-based materials are used often.

Make sure mixing containers are clean, dry, and the right size.

Jesmonite AC730 is a great choice for projects requiring a strong, durable material with a fine finish and versatility in both creative and practical applications.



Mix ratios

The standard mix ratio for AC730 is as follows:

For standard glass reinforced laminates, weigh the liquids and base in separate clean containers at the following ratio:

AC730 Liquid:
1 part by weight.

AC730 Base:
5 parts by weight

Note: When making a chopped strand premix (as explained in the 'casting' section below), you can use a 4.5:1 ratio. This ratio is for adding 13mm coarse glass chopped strands and creates a strong pouring mix, similar to a glass-reinforced laminate.

If you're using the mix to brush or spray a 'Gel Coat' or 'Mist Coat' onto the mould before laminating, increase the ratio to 5.25:1. This will help the mix stay on vertical surfaces and reduce drips.

You can adjust the mix ratio to fit your needs. Adding small amounts of liquid or base can help fine-tune the mixture. It's a good idea to do small test batches first to see if the mix works well for your mould or project.

<https://www.jesmonitecalculator.com/>

Mixing and additives



Mixing Jesmonite

Jesmonite AC730 must be mixed using a Jesmonite High-shear Mixing Blade. Attach this blade to a drill with variable speed control on the trigger and slowly add the base to the liquid whilst mixing continuously at low speed. As the last base is added, slowly increase the mix speed to around 1,000rpm and mix for a further 60 seconds or until the mix is smooth, flowing and free from lumps.

How to use Jesmonite Retarder:

Retarder is added to the pre-weighed liquids to extend the pot-life of the mixed material. Typical inclusion rates are 2g – 8g, however a small test is recommended, as the precise timing is dependent on both temperature and mix size.

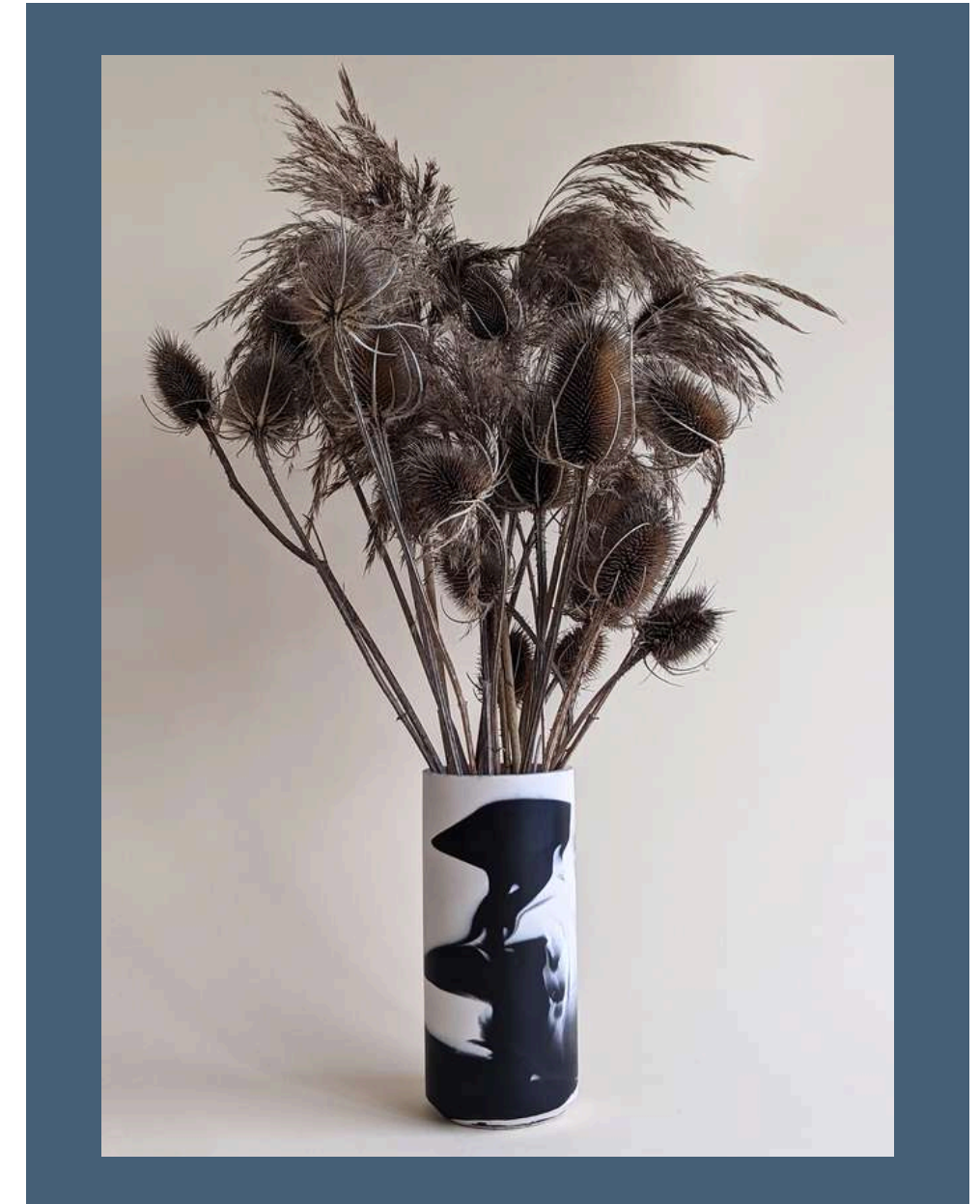
Casting

Solid Casting:

While Jesmonite AC730 is mainly used with glass fibre reinforcements, it can also be poured into open moulds to create solid casts. To prevent air bubbles on the surface, pour a small amount of material into the mould first. Then, coat the surface by brushing it or rotating the mould. Once the surface is coated, pour the rest of the mix slowly, tapping or vibrating the mould to release any trapped air.

Premix Casting:

To make your cast stronger, you can add 13mm Coarse Chopped Strands to create a pre-mix. Start by applying a 1mm to 2mm Gel Coat to the mould's surface. This helps prevent glass strands from showing through on the finished cast. Let the Gel Coat dry, then pour in the pre-mix. This method increases strength for thinner casts and makes the process easier. The typical thickness for pre-mix casts is between 8mm and 12mm, depending on size and shape. For more advice on refining these methods, contact Jesmonite.



Laminating

Laminating with Quadaxial Glass Reinforcement:

Jesmonite AC730 can be combined with Quadaxial Glass to create strong, lightweight laminated panels. To start, cut two layers of Quadaxial Glass to fit your mould. Apply a 1mm–2mm Gel Coat or Mist Coat to the mould and let it dry until touch-dry. Use about 2kg of mix per square meter for every mm of laminate thickness.

After the Gel Coat, apply a thin layer of Jesmonite to wet out the back, then add the first layer of Quadaxial Glass. Pour more mix over the glass and work it in with a brush or roller to ensure it's fully wet. Be careful with rubber moulds to avoid cracking the Gel Coat.

Next, mix in 3%–5% 13mm Coarse Chopped Strands to the remaining material. Brush this onto the mould to create a 3mm–5mm layer. Then, apply the second layer of Quadaxial Glass and brush it through with the remaining mix to wet it out.

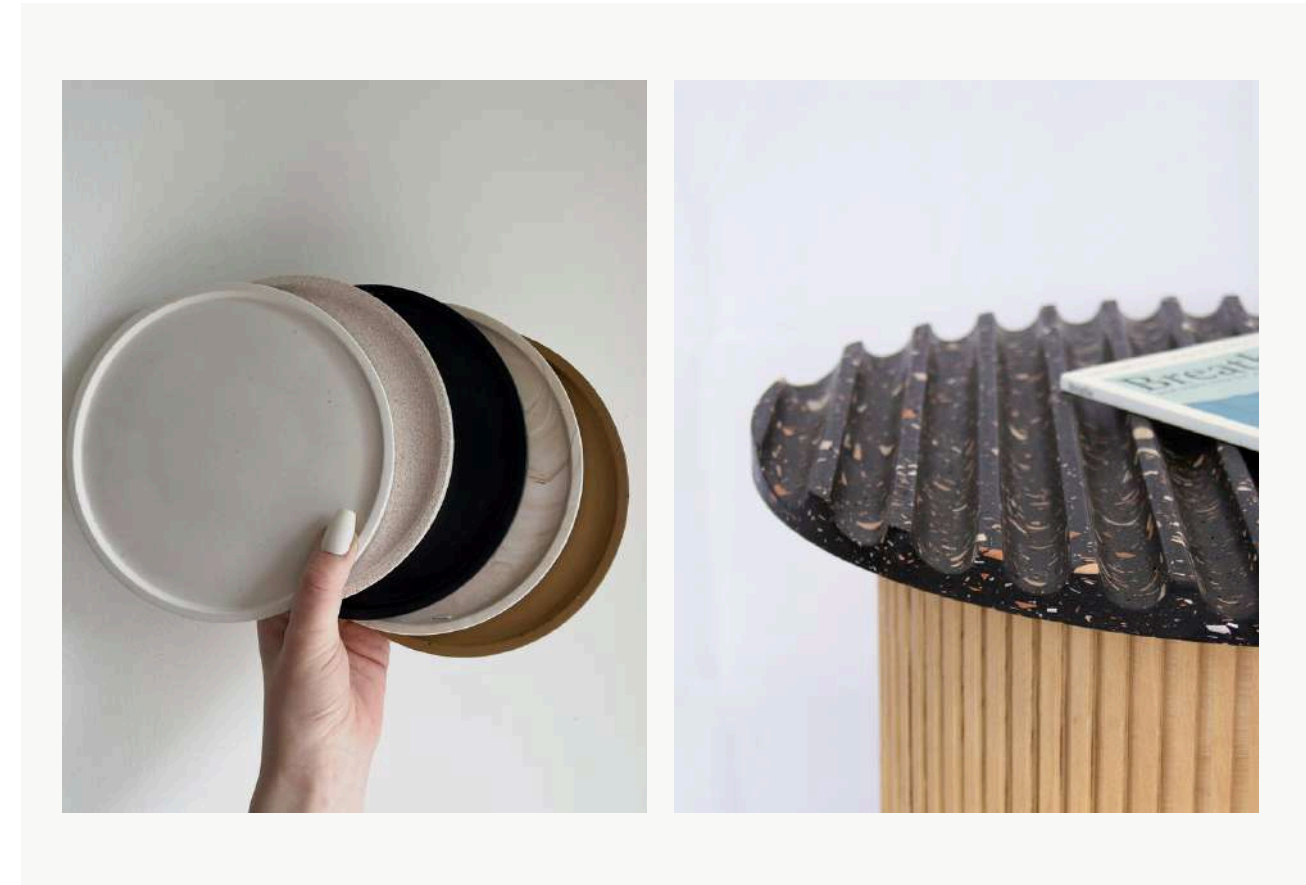
Leave the panel in the mould for 2.5–3.5 hours, ensuring the temperature stays below 40°C during the first 3 hours. You can place the mould in water to maintain the temperature. For larger flat panels, consider adding vertical edges or ribs for extra strength. If the panel will be in a public area, use fire-resistant foam instead of polystyrene.

Curing

Jesmonite AC730 achieves over 90% of its ultimate strength in the first 24 hours. Both cast and laminated objects should be kept in a warm, dry environment during this period.

They should be racked to allow optimum air-flow and stored in such a way that panels cannot 'creep' or bow under their own weight. Finished products should be packaged only when cured.

Care should also be taken when using plastic packaging, particularly in damp storage areas, as this can lead to surface staining and possible water marking.



Finalising

Surface finish:

Jesmonite AC730 is formulated to result in a stone finish. This is achieved either by using Jesmonite Acid Etch or by grit-blasting. The product can only be acid etched after curing for a minimum of 24 hours. First wet the surface of the panel with water before applying the acid solution. This will reduce the chance of the acid marking or burning the panel where it is first applied. To apply acid etch, the area must be well ventilated, and near a ready supply of clean water. The acid will produce varying degrees of etch from 1 minute through to around 4 minutes. The acid works by removing the surface to reveal the decorative aggregate and pigment in the material. The acid should be washed off with copious amounts of clean water, and the surface padded dry with a clean dry cloth. Once the surface is dry it becomes evident if there are any areas that require a further application.

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. Jesmonite AC730 is formulated primarily as a laminating compound.



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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