
PRODUCT LIST 2019

JESMONITE
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JESMONITE AC100

Jesmonite AC100 is an Acrylic Composite material supplied in two parts, a base and a liquid. It is suitable for both decorative castings and glass reinforced laminates, and can be pigmented using the Jesmonite range of water-based pigments. It is also possible to add many decorative and functional fillers in order to achieve a wider range of effects and to meet a broader spectrum of specifications.

Jesmonite AC100 can be used both internally and externally, although external use requires the application of a suitable sealer or external paint system for long-term exposure. Due to its solvent free formulation, AC100 can be cast without damage to rubber moulding compounds, and without limitation to scale. It is also dimensionally stable due to low exothermic reaction, and produces a small amount of expansion on set (1mm/ linear metre).

AC100 is supplied in separate containers of base and liquid, and mix ratios are variable to allow for both decorative and functional fillers. Normal casting and laminating requires a mix ratio of 2.5 parts Jesmonite Base to 1 Part AC100 Liquids, by weight. A full range of ancillary materials designed specifically for optimum compatibility is available. These include Metal Fillers, Thixotrope, Retarder, Pigments and Glass Reinforcements.

JESMONITE AC200

Jesmonite AC200 shares all the same attributes as AC100, however it is designed as a casting or coating compound that can be carved after it has set. AC200 can be cast into a range of moulding compounds, and the resulting material displays remarkable carving and machining properties. It has excellent adhesive properties allowing thick layers to be built up onto many substrates such as carved foams and then re-worked to produce fine detail. It is also possible to put a durable hard coat of AC100 over the carved surface or object if required. AC200 is supplied in separate containers of base and liquid, and is mixed at a ratio of 2 parts Jesmonite Base to 1 part AC200 liquid by weight. It is also fully compatible with the Jesmonite range of ancillary products that includes Pigments, Glass Reinforcements and Thixotrope.

JESMONITE AC300

Jesmonite AC300 has a lower Acrylic Resin content than AC100 and is therefore only suitable for internal decorative use as a casting and laminating compound. It is fully compatible with all Jesmonite ancillary products. In addition to its standard kit sizes of 35kg and 70kg Jesmonite AC300 is also offered in 420kg and 3,500kg bulk kits in order to minimise packaging and transport costs. The material is mixed at a ratio of 2.5 parts Jesmonite Base to 1 part AC300 liquids.

JESMONITE AC730

Jesmonite AC730 is a fast setting acrylic modified cement composite. The system is designed for glass reinforced decorative structures, and can also be used for small castings (see Technical data sheet TDS730). It is chemically compensated against shrinkage and is of low permeability. AC730 is durable in all conditions of external weathering including water features. The compound has virtually no free-lime content, and has low alkalinity, leading to major reductions in efflorescence in comparison with ordinary Portland cement systems. The material contains a fine decorative aggregate and powder pigments, carefully controlled to give a consistent decorative surface finish after treatment with a proprietary brick cleaner or acid etch. AC730 is available in eight stone finishes; Natural Stone, Bath Stone, Yellow Sandstone, White Marble, Portland Stone, Silver Grey Granite, Old Terracotta and Charcoal Black. Jesmonite offers a bespoke matching service to assist manufacturers, architects, and designers to match any colour scheme and surface finish.

FLEX METAL GEL COATS

Jesmonite Flex Metal Gel Coats are supplied in four finishes, Bronze, Copper, Brass and Silver Bronze. They are designed to be mixed with Jesmonite Flex Metal liquids to create a metal gel-coat that can be applied into moulds, or onto coated substrates such as polystyrene foam pre-coated with AC730. This is an extremely economical way of achieving beautiful metal finishes at a fraction of the cost.

JESMONITE AC730 FLEX LIQUID

Jesmonite Flex liquid is a water resistant, flexible acrylic which when added to AC730 Base creates a material with much greater ductility than the standard AC730 Liquid. It is designed for both laminating and foam coating. It can be used to produce lightweight, durable laminates of between 3mm and 5mm thickness. Mix ratios can be varied between 4:1 and 3:1, Base to liquid to achieve a variety of mix viscosities suitable for foam coating and spraying using a gravity fed spray gun.

JESMONITE AC830 CASTING

AC830 is a fast setting acrylic polymer modified cement casting composite. It is a chemically compensated against shrinkage, is of low permeability and is durable in all conditions of external weathering. The compound is designed for fine decorative castings and is suitable for statuary, water features and decorative cast objects that are externally durable and frost resistant. AC830 Casting is supplied in an off-white colour that can then be pigmented using a range of powder cement pigments. The material is easy to pour and compact without expensive vibration equipment. It is supplied as two components, a water-based acrylic liquid, and a blended powder base. A super-plasticiser is supplied to further enhance strengths, ease of casting, and ultimate durability. The compound is offered in Natural (off-white) however a bespoke colour-matching service is also available. *NB. This product is supplied in Bulk FIBC bags only.*

RETARDER

Set times of all Jesmonite composite materials can be extended by the addition of Retarder to increase working time. There is a Retarder for AC100, AC200 and AC300, and a separate Retarder for the cement based materials AC730, AC830 and AC930. Please note that the end user should perform tests in the workshop environment, as extremes of temperature and humidity can effect set times. Addition rates can be found in the individual composite user guides.

THIXOTROPE

Thixotrope is added so that the viscosity of Jesmonite AC100/200/300 can be adjusted to the user's preference. This is particularly useful when applying a Gel Coat into a mould. By adding Thixotrope it is possible to apply a controlled 1mm – 3mm layer of material without it running off the mould surface. This also prevents glass reinforcements from showing at the face of laminated objects. Thixotrope can also be used to make the material into a paste, which can be used filling and repair. *NB. Thixotrope is not compatible with AC730 or AC830.*

GLASS REINFORCEMENTS

Quadaxial Glass

This type of glass reinforcement is tailor made for use with Jesmonite. It is based on the latest multi-axial glass reinforcement technology, which makes Jesmonite fibre-glass laminates light, strong and fire resistant. It is constructed like a lace, with continuous glass strands in a four axis (multi-axial) configuration. There are very few free filaments, making the glass safe and comfortable to use. It can be accurately cut using scissors or roller cutters, and will conform to even the most complex shapes. This makes it especially suitable to mould making and Jesmonite panel construction.

AR Quadaxial Glass

Quadaxial Glass reinforcement is now available in an Alkali Resistant form using Cem-FIL® 5325 Roving. The product is designed for use with AC730 to make Glass Reinforced Cement products that are fully compliant with BS/EN 1170, the internationally recognised test criteria for such materials.

CHOPPED STRANDS

Chopped Strands – These can be added to all Jesmonite composites to give increased strength in thin section castings, and also to act as a strength enhancing addition to laminates. They are available in three types: 6mm and 12mm Standard, and 12mm Coarse that are designed specifically for use with Jesmonite AC730 to create a premix. Chopped strands can also be used to add impact resistance when applying thin sections of Jesmonite to carved objects made from Polystyrene.

PVA FIBRES

PVA fibres are added to Jesmonite AC730/830/930 as an alternative to Glass Fibres in all cast products such as garden ornaments and cast decorative panels. They are characterised by good adhesion and dispersion in Jesmonite composites, and by their high tensile strength and low elongation. PVA fibres will lead to improved flexural strength, and will help resist cracking and surface crazing in cast products. Typical addition rates are 1% – 2% of total mix weight.

PIGMENTS

Jesmonite Pigments are aqueous dispersions compatible with Jesmonite Composites. When dispersed in Jesmonite materials they offer excellent chemical stability, heat stability and UV resistance. Bespoke pigments and a colour matching service are available on request. Call Jesmonite for further details. Pigments are available in 200g and 1,000g bottles.

METAL FILLERS

These are added to Jesmonite AC100 and AC300 to create metal finishes. Metal fillers are available in Bronze, Copper, Brass and Silver Bronze. Further information on the correct additions and finishing techniques are in the relevant Instruction sheets.

JESMONITE HIGH-SHEAR MIX BLADES

High-Shear mix blades are essential for the proper mixing of all Jesmonite composite materials. They are specifically designed for adding base to liquids. The mixing action reduces air bubbles, and ensures that the mix is smooth and free from lumps. Two sizes are available, 65mm and 105mm. They are made from Stainless Steel, and will attach to all conventional drills.

RELEASE WAX

This is a universal paste release wax that will offer excellent release from a wide range of rigid mould compounds including plaster, Jesmonite, GRP, metal, wood and glass. It can also be used on production equipment such as scales and casting tables to assist in cleaning. Please note that some porous surfaces such as plaster and timber may need to be sealed before release wax is applied, and trials should be carried out to ensure that the product is suitable.

ACID ETCH

Acid Etch is used to expose the fine decorative aggregate in Jesmonite AC730 materials. The acid removes the cement rich film from the surface of objects moulded in AC730 to produce a stone finish. When diluted with water it can also be used as a cleaner for removing marks from AC730. Please refer to the AC730 User guide for further technical information.

SUPER PLASTICISER

Super Plasticiser is added to AC830 to create a self-levelling consistency whilst maximising the Base to Liquids ratio. This reduces the water/cement ratio in the system which leads to higher ultimate strengths and durability. Please see the AC830 User guide for advice on addition rates.

ACRYLIC SEALER

Jesmonite Sealer is a pure acrylic coating for AC100. It is durable, flexible, and UV resistant. Dependent upon prevailing conditions, products sealed with Jesmonite Sealer will require re-coating at 6 –10 year intervals. Jesmonite Sealer can also be diluted with water and pigmented using Jesmonite Paste pigments to create colour washes for patinas or to age casts.

PENETRATING SEALER

Penetrating Sealer is designed for use with all Jesmonite cement based materials. This includes AC730 stone and Flex Metal Gel Coat finishes, as well as AC830 cast products. The material provides invisible protection against water and oil, and also provides stain resistance against many liquids and environmental contaminants.

FLEXIGUARD SEALER

Flexiguard Sealer is based on nano-technology and is a stain-resistant, invisible sealer which creates a clear, UV-stable, and extremely durable surface for all Jesmonite composites when used externally. Flexiguard is unique in that it creates a low-energy surface that prevents soiling, and mould and fungal growth. This product, once applied, significantly reduces the need for cleaning and maintenance and is effectively permanent due to the chemical bond made with the Jesmonite substrate (subject to abrasion). It can be applied very easily almost anywhere – on-site or in a manufacturing environment.

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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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THE KEY BENEFITS OF USING JESMONITE



Stronger

Strong, flexible and more durable, making it high impact resistant.



Finer

Replicates the very finest detail.



Greener

Water-based not solvent-based making it kinder to the environment.



Lighter

Lighter than stone, glass-reinforced concrete, sand and cement products – perfect for film sets.



Safer

Fire-resistant with a class zero fire rating, reduced smoke density and toxicity characteristics. Solvent free with no VOC's.



More choice

Can be pigmented to any colour or RAL reference. It can also mimic any texture and reproduce the effect of materials such as stone, metal, wood, leather and fabric.