

SOLVENT-BASED GLASS FIBRE

LAY UP RESINS

Lay Up Resin - Resin A

A pre-accelerated low viscosity polyester resin with rapid hardening characteristics. It combines fast impregnation of reinforcements and fillers with a very short mould release time. Suitable for hand lay or spray applications. It is filled and has a matt finish. Also suitable for hand props and scenic work but it is not flame retardant. Add 2 ml of catalyst to 100 g of resin. Previously Crystic 471PALV. SPECIFICATION: UN 1866. Pot life at 20°C/12 min. Pot life at 25°C/8 min. Max pigment paste: 10%. Appearance: cloudy mauvish. Barcol hardness: 47. Water absorption: 24 hours at 23°C/18 mg. Tensile strength of resin: 68 MPa. Tensile modulus of resin: MPa 3700. Elongation at break; 2.5%. Specific gravity at 25°C: 1.22. Catalyst: UN 3105.



Firestop Flame Retardant Resin S 810 & VNature Gelcoat

A pre-accelerated low viscosity polyester resin recommended for the production of opaque flame retardant laminates. Michael Whiteley kindly tested this for us and was very happy - he found the slightly thicker than normal gelcoat combined with the slightly thinner resin make the combo particularly suitable for building larger pieces of scenery and mouldings. UN1866



SPECIFICATION Resin: UN1866 Gel time: 20-30 min. Pot life at 20°C/20-30 min. Barcol hardness: 25. Tensile strength: 26.96 MPa. Elongation at break: 2.67%. Specific gravity at 25°C: 1.58 g/ml. Catalyst: UN 3105 [max. 1 ml per 100 g of resin]. SPECIFICATION Gelcoat: UN1866 Gel time: 10-15 min. Pot life at 20°C/14-21 min. Max pigment paste: 10%. Barcol hardness: soft gelcoat. Tensile strength: 52 MPa. Elongation at break: 8.2%. Specific gravity at 25°C: 1.3 g/ml. Catalyst: UN 3105 [max. 2 ml per 100 g of resin].

code	description	weight	price
PRO401	Lay Up Resin 471PALV	5kg	£44.10
PROCAT1	Catalyst for Polyester Resin	100g	£5.80
PROCAT5	Catalyst for Polyester Resin	500g	£13.85

code	description	weight	price
PROS810	Resin	22kg	£242.45
PROF5000	Gelcoat	22kg	£239.00

FLINTS CLEAR CASTING RESIN

Flints Clear Casting Resin

Clear casting resin for props, costume jewellery or paperweights. Cures water clear, ideal for encapsulating items. It's a pre accelerated, low exothermic, low viscosity, clear, unsaturated polyester resin. Add 1-2% of catalyst to resin weight (eg. 100g resin = 1-2 g of catalyst)

Colour before curing: Translucent, slightly blue, When cured: crystal clear, Tensile Strength: 69 Mpa, Flexural Strength: 90 Mpa



GELCOATS

Gelcoat - Crystic 65PA

This brush-applied gelcoat has excellent weather- and water-resistance with low taint. Moulders choose it over competitively priced products because of its exceptional handling properties in production, good flexibility, good gloss and ease of repair. This gelcoat is also widely used in the marine industry. Add 2 ml of catalyst per 100 g of resin. Lloyds approved.

SPECIFICATION: UN 1866. Pot life at 20°C: 15 min. Pot life at 25°C: 9 min. Available to order in various colours. Adding pigment paste may affect the water- and weather-resistance. Appearance: cloudy mauvish. Barcol hardness: 42. Water absorption 24 hours at 23°C/18 mg. Tensile strength of resin: 75 MPa. Tensile modulus of resin: MPa 3,500. Elongation at break: 3%. Specific gravity at 25°C: 1.11. Catalyst: UN 3105.

code	description	weight	price
PRO7001	Flints Clear Casting Resin	1kg	£18.35
PRO7005	Flints Clear Casting Resin	5kg	£61.75
PROCAT1	Catalyst for Polyester Resin	100g	£5.80
PROCAT5	Catalyst for Polyester Resin	500g	£13.85

code	weight	price
PRO403	5kg	£56.86
PRO412	25kg	£212.60

CASTING RESIN

Smooth Cast [Bright White]

Virtually bubble-free and ultra-low viscosity resin, ideal for capturing detail. When cured Smooth-Cast castings are bright white, tough and durable. They can be painted and resist moisture, mild solvents, moderate heat and dilute acids. Likewise, they can withstand being machined, primed and bonded to other surfaces. Comes in a two part kit to be mixed in a 1:1 volume ratio to activate. We stock two types of Smooth-Cast; Smooth-Cast 300 is fast setting whilst Smooth-Cast 305 is medium setting.

SPECIFICATION: Colour: White, Mix 1A:1B by volume or 100A : 90B by weight. Tensile strength: 3,000 psi, Mixed Viscosity: 80 cps, Specific Gravity: 105 g/cc, Specific Volume: 26.4 in3/lb, Heat Deflection Temp: 50°C, Shore D hardness: 70. Smooth Cast 300: 3 min pot life at 23°C, 7-10 min cure time at 23°C, Elongation at break: 5%, Flexural Strength: 4,510 psi, Compressive Strength: 4,000 psi, Shrinkage: 0.01 inch/inch. Smooth Cast 305: 7 min pot life at 23°C 30-40 mins cure time at 23°C, Elongation at break: 7.5%, Flexural Strength: 4,000 psi, Compressive Strength: 3,800 psi, Shrinkage: 0.0065 inch/inch.



REINFORCING RESIN FOR POLYSTYRENE

Ares P800 Resin 25 kg

Designed specifically for adhesion to expanded polystyrene foam, we were really impressed with both its adhesion and finished coating effect. We tested it on our expanded polystyrene balls (page 114). Tests showed a good clear coat was achieved when applied with a reinforced surfacing tissue, and alone. The resin didn't melt the polystyrene at all and gave a really good clarity. Perfect for sealing and gluing larger scale projects, or where durability is key. Catalyst should be added at 1-2 % subject to conditions and requirements.

Formerly known as R999 but has the same formulation.

SPECIFICATION: UN 1866. Pot life at 20°C: 40-45 mins Pot life at 25°C: 30 mins Appearance: pinkish opaque. Water absorption: 0.63% in 72 hours at 25°C. Specific gravity at 25°C: 1.13 g/ml Catalyst: UN 3105.



code	description	cure time	weight	price
PRO47641	300 (fast)	7-10mins	0.86kg	£25.30
PRO47661	300 (fast)	7-10mins	6.98kg	£155.75
PRO47441	305 (medium)	30-40mins	0.86kg	£27.73
PRO47461	305 (medium)	30-40mins	6.98kg	£155.98

code	weight	price
PROR99925	25kg	£248.00

AMPRO EPOXY BIO RESIN

Ampro Epoxy Bio Resin

Bio-Based Epoxy Resin to use for bonding materials, laminating as a heavy duty top coat, filling when mixed with micro balloons or glass bubbles, or as GRP (Glass reinforced plastic, aka fibreglass). This more sustainable marine grade resin had the same mechanical properties as the previous version we sold so we have swapped over. 40 - 60 % of this resin is bio based which makes it one of highest bio-based resins on the market. Easy 3:1 (resin:hardener) mix ratio by volume, with the option of a fast or slow hardener depending on your use.

Colour when cured: Translucent/amber, Curing Times for Fast Hardener: Pot life/Working time = 23 mins, Tack Free = 2hrs 40mins, Earliest sanding time: 16 hrs, Curing Times for Slow Hardener: Pot life/Working time = 43 mins, Tack Free = 4hrs 30mins, Earliest sanding time: 20 hrs. Please note that curing times vary depending on ambient temperatures, for optimal results use at 25 °C.



code	description	Type	weight	price
ADHF530060S	Ampro 4.2 kg Fast Resin/ Hardener	Fast	1.3kg	£54.91
ADHF530033	Ampro Bio-Slow-1.3kg Resin/ Hardener	Slow	1.3kg	£55.49

FLINTS EPOXY RESIN

Flints Epoxy Resin

Economical Epoxy Resin for general purpose bonding, laminating, filling and casting. With the introduction of the new Marine grade Bio Based Epoxy Resin we thought it would be useful to also introduce new a more general-purpose, budget friendly option. Simple mix ratio of 2 parts resin to 1 part hardener by weight.

Colour when cured: Translucent/slightly amber, Pot life/Working time: 10 mins, Full cure: 7 days

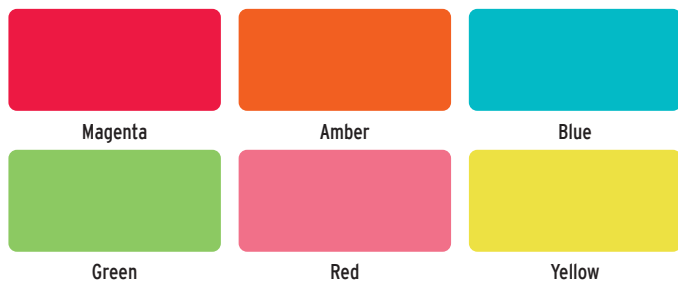


code	description	weight	price
PROEPOXRES15K	Flints Epoxy Resin Kit	1.5kg	£31.87
PROEPOXRES45K	Flints Epoxy Resin Kit	7.5kg	£112.88

RESIN ADDITIVES

Translucent Resin Pigment

For use with the Flints Clear Casting Resin, use these translucent pigments to add a tint of colour to your resin. The more pigment you add the greater the effect on the opacity, so these are best used sparingly, adding a little at a time. 1 or 2% of pigment of the total weight of the resin (ie. 1-2 g per 100 g) should be enough to give you a strong colour without noticeably reducing opacity. For use with polyester resin only.



code	Colour	weight	price
PR020162	Magenta	500g	£21.06
PR06796	Amber	500g	£19.10
PR06798	Blue	500g	£15.36
PR08618	Green	500g	£15.99
PR06797	Red	500g	£17.14
PR06794	Yellow	500g	£16.44

Crystic Pigment Pastes

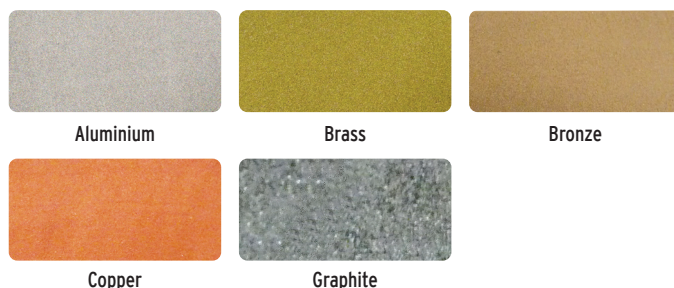
The above resins can be tinted using these pigments. Do not add more than the recommended amount [see the Technical Data of each product]. A huge range of colours are available to order, but these are also intermixable which is a big plus!



code	Colour	weight	price
PROPIG20	Golden Yellow	500g	£22.49
PROPIG22	Light Teak	500g	£15.71
PROPIG24	Post Office Red	500g	£20.58
PROPIG26	Black	500g	£12.18
PROPIG28	Cream	500g	£15.36
PROPIG21	Yacht Green	500g	£17.70
PROPIG23	Tangerine	500g	£27.44
PROPIG25	White	500g	£12.32
PROPIG27	Bright Blue	500g	£16.62
PROPIG29	Aircraft Grey	500g	£15.20

Metallic Powders

For metallic-looking castings, pre mix resin with metallic powder before adding catalyst [adhere to mix ratio of catalyst to resin, rather than mix including metallic powder]. The dull casting will need buffing with wire wool and metal polish to bring out the realistic effect [check out the polisher on page 132]. An aged effect can be obtained by adding one part of graphite powder per ten parts of metallic powder. Flints also sell metallic "powders" for making paint but they are not suitable for this application.



code	Colour	max powder resin ratio	weight	price
PRO453	Aluminium	1:1	500g	£23.50
PRO452	Aluminium	1:1	5kg	£119.55
PRO455	Brass	5:1	500g	£33.37
PRO454	Brass	5:1	5kg	£255.60
PRO451	Bronze	7:1	500g	£33.93
PRO450	Bronze	7:1	5kg	£163.30
PRO457	Copper	3:1	500g	£35.50
PRO456	Copper	3:1	5kg	£267.55
PATGP0200	Graphite	see text	200g	£5.95
PATGP2400	Graphite	see text	2kg	£57.14

SOLVENT-BASED GLASS FIBRE

REINFORCEMENTS

Chopped Strand Mat 450 g/m² [Type CTG]

This is the most popular weight of chopped strand mat [CSM] suitable for most laminating. Using a fin roller or paddle roller [page 143] will greatly aid effective wetting out, essential for strong long-lasting laminates. The mat is 965 mm wide and is available by the metre. Also available as a box containing a roll of approx 56 metres which weighs 33 kg. Not suitable for use with Jesmonite because the mat requires solvents to make it pliable. Also see Chopped Strands [page 134].



code	width	price	56 m+
PRO430	965mm	£3.55	£2.61

Surfacing Tissues [ACM1]

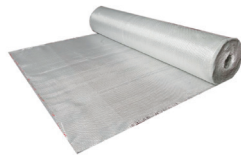
The application of surfacing tissue will provide a smoother finish to laminating work.



code	width	per m	250 m+
PRO433	1m	£2.65	£2.13

Woven Roving 600 g/m²

Woven roving is used to obtain a higher strength weight ratio than is possible with chopped strand mat [CSM]. Available by the metre or in a roll of approximately 60 metres. Weight of 60 m is 40 kg.



code	weight	width	per m	60 m+
PRO436	600g/m ²	1m	£3.70	£3.00

Glass Tape

Reinforces plywood joints when used with Ampro Epoxy Resin [see previous page].



code	length	width	per 50 m
PROME020C	50m	50mm	£16.51

Paper Rope

To stiffen large areas of glass reinforced fibre. Paper rope can also be used to act as formers for laminated ribs on the rear of the structure. 1" diameter though other sizes of paper rope are available [page 107].



code	diameter	per m
PRO123	25.5mm	£1.54
code	diameter	100 m coil
PRO123D	25.5mm	£117.25

FILLER POWDERS

Glass Bubbles

These hollow spheres serve to increase the volume and decrease the density of any resin system. They are used in adhesives and to make easily sanded filling and fairing compounds. In the theatre industry, they are often added to textures such as Idenden to reduce the weight. SPECIFICATION: Composition: 'C' Glass. Appearance: white. Particle size: 40 - 80 microns. Particle density: 200 g/litre approx. Bulk density: 100 - 150 g/litre approx.



code	weight	volume	price
FILA230001	0.3kg	3L	£17.34
FILA230003	5kg	50L	£188.82

Fillite

Fillite is a glass hard, inert, hollow silicate sphere. Fillite is primarily used to reduce the weight of resins and moulding materials. The spherical nature of the material ensures the lowest quantity of binder is needed to wet out the material.

- ✓ Lightweight - reduces the weight of your material
- ✓ Spherical - free-flowing
- ✓ Inert

SPECIFICATION: Average particle density: 600 - 850 g/L. Average bulk density: 350 - 450 g/L. Packing factor: 60% - 65%. Appearance: Grey powder. Hardness: Mohs scale 5. Average wall thickness: 5% - 10%. Melting temperature: 1200° - 1350°C. Thermal conductivity: 0.11 Wm-1K-1. Loss on ignition: 2% maximum. Surface moisture: 0.3% maximum. Crush strength: 105 - 210 kg/cm² [1,500 - 3,000 psi].



code	weight	volume	price
PRO500SG	20kg	50L	£71.51

SP Micro Fibres

These are very fine wood cellulose fibres commonly used to create structural adhesives for bonding both wood and GRP. Because any low viscosity resin system is readily absorbed into a porous surface such as wood, an unfilled adhesive may tend to give a "dry joint". With their absorbent properties, micro fibres can retain a significant quantity of adhesive within a joint and limit resin absorption into the surrounding surface, thus ensuring an adequate resin supply for adhesion. Where the strongest bond is required e.g. timber scarf joints, microfibrils should always be used in preference to hollow sphere types of filler. For bonding parallel to the grain with lower density, lower strength timbers, such as cedar or obeche, a micro-balloon mix is often adequate, and is of lower density.



Product Details

Composition: Milled bleached cellulose wood pulp
 Appearance: White 'fluffy' fibrous consistency
 Particle Size: 200 - 300 microns
 Particle Density: Particles absorb resin
 Bulk Density: 100 g/litre approx

code	weight	price
ADHA215003	500g	£9.95

FLOW MODIFIER

Flow Modifier - Colloidal Silica

When added to resin with other filler powders, the colloidal silica will act as a thickening agent to prevent sagging on vertical surfaces. A typical mix would be 445 ml of resin, 145 ml of glass bubbles and 11 ml of colloidal silica.

code	weight	volume	price
FILA220003	250g	5L	£15.42

