

LAY UP RESINS



Also see laminating rollers [page 107]

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.

Lay Up Resin Crystic 471PALV	code		5 kg	
	PRO401			£45.00
Catalyst M	code	100 g	code	1 kg
	PRO422	£5.34	PRO425	£8.64



Flame Retardant Lay Up Resin - Crystic 356PA

A pre-accelerated filled polyester resin recommended for the production of opaque flame retardant laminates. The unique properties of Crystic 356PA Resin make it particularly suitable for building larger pieces of scenery and mouldings. With standard gel coats it is classified to BS 476 Part 7 Class 1 and French

M1. It has a 14 minute gel time. Add 2 ml of catalyst per 100 g of resin. SPECIFICATION: UN 1866. Pot life at 20°C/20 min. Pot life at 25°C/12 min. Max pigment paste: 5%. Appearance: pinkish white opaque. Barcol hardness: 56. Water absorption: 24 hours at 23°C/12 mg. Tensile strength of resin: 45 MPa. Tensile modulus of resin: MPa 7400. Elongation at break: 0.7%. Specific gravity at 25°C: 1.62. Catalyst: UN 3105.

FR Lay Up Resin - Crystic 356PA	code		25 kg	
	PRO410			£177.45
Catalyst M	code	100 g	code	1 kg
	PRO422	£5.34	PRO425	£8.64



Marine Grade Resin - Crystic 2.406PA This is a low styrene resin with good wet out properties. The gel time is approximately 16 minutes. A colour change mechanism is incorporated when the catalyst is added. The colour changes from pale blue to green eventually clearing as the resin cures. Lloyds approved. Catalyst should be added at 1 or 2%.

SPECIFICATION: UN 1866. Pot life at 20°C: 22 min at 1% or 16 min at 2%. Pot life at 25°C: 16 min at 1% or 11 min at 2%. Max pigment paste - certain pigments affect this resin please seek advice. Appearance: pale blue. Barcol hardness: 45. Water absorption 24 hours at 23°C/14 mg. Tensile strength of resin: 54 MPa. Tensile modulus of resin: MPa 3,700. Elongation at break: 1.7%. Specific gravity at 25°C: 1.20. Catalyst: UN 3105.

Crystic 2.8500PA	code		25 kg	
	PRO2406PA			£158.37
Catalyst M	code	100 g	code	1 kg
	PRO422	£5.34	PRO425	£8.64



Working with resins? Why not order a pack of Tough Wipes [page 342]? They quickly remove resin, paints and adhesives from your hands and gently condition the skin.

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. If used with a flame retardant lay up resin it can comply with BS 476 Part 7. 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 effect 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.

Crystic 65PA	code	5 kg	code	25 kg
	PRO403	£52.98	PRO412	£173.70
Catalyst M	code	100 g	code	1 kg
	PRO422	£5.34	PRO425	£8.64

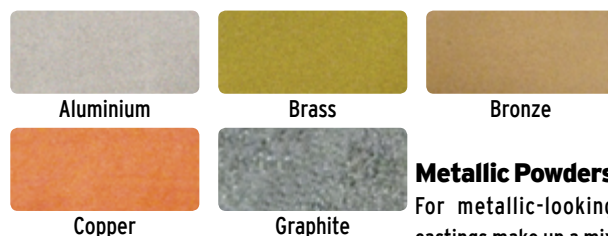
RESIN ADDITIVES



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

further 22 colours are available but only in 25 kg drums.

Crystic Pigment Pastes	code	500 g	code	500 g	
Yellow [contains lead]	PROPIG1	£12.58	White	PROPIG2	£12.10
Green [contains lead]	PROPIG5	£13.03	Black	PROPIG3	£12.10
Brown [contains lead]	PROPIG7	£12.58	Blue	PROPIG4	£13.03
Orange [contains lead]	PROPIG8	£13.03	Cream	PROPIG6	£12.58
Red [contains lead]	PROPIG9	£14.44	Grey	PROPIG10	£12.58



Metallic Powders For metallic-looking castings make up a mix

of resin and metallic powder allowing 2 ml of catalyst M per 100 g of resin. The dull casting will need buffing with wire wool and metal polish to bring out the realistic effect [check out the polisher on page 100]. 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 [page 36].

Metallic Powders	code	500 g	2 kg	code	5 kg	
	max powder resin ratio					
Aluminium	1:1	PRO453	£19.10	-	PRO452	£77.39
Brass	5:1	PRO455	£18.75	-	PRO454	£140.00
Bronze	7:1	PRO451	£19.95	-	PRO450	£142.35
Copper	3:1	PRO457	£19.95	-	PRO456	£144.90
Graphite	see text	PAT8663	-	£17.78	-	-

CLEAR CASTING RESIN

**Embedding Resin [Clear Casting]**

This embedding resin can be used for making small props and costume jewellery. Items can be embedded in the resin. Moulds can be made from glass [with a release agent] or polythene-lined containers but flexible rubber is not suitable. Add 2 ml of Catalyst M to 100 g of resin.

Embedding Resin [clear casting]	code	1 kg	code	5 kg
	PR0404	£20.21	PR0405	£52.31
Catalyst M	code	100g	code	1 kg
	PR0422	£5.34	PR0425	£8.64

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 107] 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.

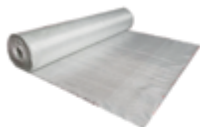
Chopped Strand Mat	width	code	per m	56 m+
	965 mm	PR0430	£3.25	£1.85

Also see Chopped Strands [page 102].



Surfacing Tissue [ACM1] The application of surfacing tissue will provide a smoother finish to laminating work.

Surfacing Tissue [ACM1]	width	code	per m	250 m+
	1 m	PR0433	£1.62	£1.26



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.

Woven Roving 600 g/m ²	width	code	per m	60 m+
	1 m	PR0436	£3.50	£2.85



Glass Tape Reinforces plywood joints when used with SP 106 Epoxy Resin [page 105].

Glass Tape [50 m]	width	code	per 50 m
	50 mm	PROME0020C	£12.90



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 81].

Paper Rope	code	per m	code	100 m coil
25.5 mm diameter	PR0123	£0.97	PR0123D	£74.90

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. Suitable for use below the waterline.

Glass Bubbles	approx volume	code	price
0.3 kg	3 L	FILA230001	£15.98
5 kg	50 L	FILA230003	£145.89

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.

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].

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

Fillite	approx volume	code	price
20 kg	50 L	PRO500SG	£40.95



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

SP Micro Fibres	size	code	price
Tub	500 g	ADHA215003	£9.88

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.

Colloidal Silica	approx volume	code	price
250 g	5 L	FILA220003	£8.98