

RESOLTECH 1070S

Data Sheet - 18/06/2010

Hardener 1074

CLEAR EPOXY LAMINATING SYSTEM

- **Clear laminates and topcoats.**
- **Ease of use, room temperature curing, self leveling.**
- **Excellent UV resistance.**
- **Can be top coated with polyester without inhibition**



RESOLTECH 1070S is a crystal clear epoxy laminating system formulated to produce clear laminates and high gloss coatings with good UV stability and high mechanical properties.

The 1070S system is formulated for the manufacture of surf, wind-surfs, kite-boards, wood glazing or any composites parts with high-end finish aspects requirements, enhancing the appearance of the reinforcement materials used.

The resulting laminate will be absolutely clear on carbon fibre and even transparent if applied on special glass fabrics with TF970 treatment, enabling the production of high-end finish aspects.

The viscosity is adapted for squeegee, brush or roller application, and provides a perfect bubble free surface due to its surface tension properties.

The 1070S system has been formulated in order to leave virtually no free amines on the laminate. This even enables the use of any quality polyester finish coat for quick sanding on top of the laminate without inhibition of the polyester.

Resoltech 1070S will cure at ambient temperature and obtain 90% of its mechanical properties after 7 days at ambient temperature. Post curing will elevate the final TG up to 85 °C.

The UV stability of Resoltech 1070S is the highest on the market according to comparative testing according to norm UNE EN 927-6 (700 hours of exposition).

Resin 1070S

Hardener 1074

CLEAR EPOXY LAMINATING SYSTEM

MIXING RATIO

| | by weight | by volume |
|----------------|-----------|-----------|
| Resin 1070S | 100 | 2 |
| Hardeners 1074 | 40 | 1 |

WARNING:

The mixing ratio must be accurately followed. It is not possible to change the ratio, it would result in lower mechanical properties.

The mixture should be thoroughly stirred to ensure full homogeneity.

It is important to note that epoxy systems tend to heat up much faster in a pot than as a thin film. It is therefore necessary to only mix the necessary amount usable within the given pot life. Keeping the mixture in flat open containers reduces the risks of exothermic reaction.

APPLICATION

The standard procedure of working with epoxy systems applies to this system. The 1070S can be applied by squeegee, brush, roller, infused or injected. In case of laminating over a cured surface without peel ply, it is required to deglaze, clean and degrease the support prior to laminating.

It is recommended to have workshop temperature conditions between **18-25°C** in order to facilitate the mixing and the reinforcement fibers impregnation. A lower temperature will increase the viscosity of the mix as well as it's pot life. On the contrary, a higher temperature will reduce the viscosity and the pot life of the mix.

For more information, please refer to the applications technical bulletins (TechNotes), available on request.

PHYSICAL CHARACTERISTICS @ 23°C

Visual Aspect

1070S : Clear purple liquid
1074 : Clear liquid
Mix : Clear purple liquid

Density

1070S : 1,15
1074 : 0,98 to 1,00
Mix : 1,10

Viscosity

1070S : 1500 mPa.s
1074 : 70 mPa.s
Mix : 400 mPa.s

Resin 1070S

Hardener 1074

REACTIVITY

POT LIFE

Reactivity measures at 23°C on 100g realized on Trombotech®

1070S - 1074 : 40 min

In surf-board manufacturing, the critical step of production is the time after which it is possible to turn over the board in order to laminate the other side without leaving marks on the fresh laminate.

The following “handling time” table specifically refers to the time to turn over laminated surfboards without leaving marks of the stands on the laminate.

HANDLING TIME 1070S-1074

| | |
|----------|------|
| @ 30°C : | 5 h |
| @ 23°C : | 8 h |
| @ 20°C : | 16 h |

FILM HARD & SANDABLE 1070S-1074

| | | |
|----------|------|-----|
| @ 30°C : | 8h | 6 h |
| @ 23°C : | 12 h | 8 h |

CROSS LINKING & POST-CURE

It is not advisable to post-cure the 1070S system at a temperature higher than to 60°C if working in open moulds or without moulds on a pre-shaped core. High temperature cures can result in surface tensions and deformations. 80% of the thermo-mechanical properties will be obtained after 7 days at room temperature (25°C). In order to obtain higher thermo-mechanical properties with a TG above 80 °C, it is necessary to post-cure the laminate at the following cycle: **24h at room temperature (20-25° C) + 15h at 60°C** *The following table sows the TG obtained according to the curing cycles.*

| | | | |
|---------------|--------------------------|--------------------------|---------------------------|
| 7 days @ 25°C | 24h @ 25°C + 3h @60°C | 24h @ 25°C + 8h @60°C | 24h @ 25°C + 15h @60°C |
| TG 58°C | TG 60°C | TG 70°C | TG 85°C |

MECHANICAL PROPERTIES

TENSION

Tensile modulus : 3500 MPa
Tensile strength : 80 MPa

FLEXION

Flexural modulus :3400 MPa
Flexural strength : 120 MPa

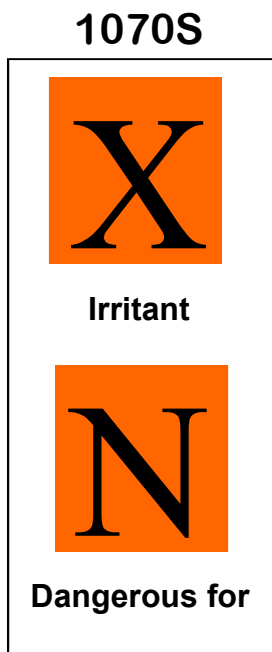
HARDENESS

Shore A (0-15s) 99-98

Resin 1070S

Hardeners 1074

LABELLING



PACKAGING

- Plastic jerricane kit of 1 kg + 0.40 kg.
- Plastic jerricane kit of 5 kg + 2kg.
- Plastic jerricane kit of 25 kg + 10 kg.
- Plastic jerricane kit of 200 kg + 80 kg.

TRANSPORT & STORAGE

Shelf life is one year in sealed containers as provided. Keep containers sealed and away from heat and cold preferably between 10°C and 30°C in a well ventilated area.

HEALTH & SAFETY

It is advised to follow basic rules such as avoiding skin contact, wear masks when producing dust. Please read our standard health and safety sheet for more information.

In case of eye contamination, wash with water and seek medical advice.

Nota The data provided in this document is the result of tests and is believed to be accurate. We do not accept any responsibility over the mishandling of these products and our liability is limited strictly to the value of the products we manufacture and supply.



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Page 4/6