Lange Ritter
Faserverstärkte Kunststoffe

LARIT 1070S CLEAR
Hardener LARIT 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




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

The **LARIT 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 & blush free surface due to its surface tension properties.

The **LARIT 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.

LARIT 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 above 70°C.

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

Mixing RATIO

	By weight	by Volume
Resin 1070S	100	2
Hardener 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 preferable 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 **LARIT 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, cleand 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 its 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

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

REACTIVITY

POT LIFE

Reactivity measures at 23°C on 70ml realized on Trombotech

1070S – 1074: 40 min +/- 10 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 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	
@ 30°C:	8 h
@ 23°C:	12 h

CROSS LINKING & POST-CURE

It is not advisible 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 5 days at room temperature (25°C). In order to obtain higher thermo-mechanical properties with a TG above 50°C °C, it is necessary to post-cure the laminate at the following cycle: **24h at room temperature (20 – 25°C) + 8h 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 + 10h@90°C**
TG 41°C	TG 48°C	TG 57°C	TG 70°C

MECHANICAL PROPERTIES

Flexion (ISO 178)

Module: 2.3 GPa
Max Strength: 64 MPa
Elongation Max strength: 4,7%

Module: 3.0 GPa
Max Strength Max: 85.8 MPa
Elongation Max strength Max: 3.1%

Hardness

87 Shore D

Curing 7 days at 25°C

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

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.