



RESOLTECH 1040

HIGH PERFORMANCE EPOXY LAMINATING SYSTEM

Advanced epoxy laminating system formulated to manufacture high performance structures with or without post-curing. The system is suitable for the manufacture of large structures and composite parts by contact, infusion and injection moulding. It features an adjustable working time from **15mn to 8 hours**, a **max. Tg of 144°C**, optimised viscosity and low toxicity to the user. It is possible to release the parts from the mould without post-curing (except with the HT & SL hardeners). The resulting structures will have an excellent resistance to high temperature. The system is also suitable for casting and filament winding applications.

MIXING

HARDENER	1041SL*	1041HT*	1042HT*	1043	1046	1048
BY WEIGHT	100 + 35	100 + 30	100 + 25	100 + 35	100 + 24	100 + 22
BY VOLUME	N/A	N/A	N/A	N/A	N/A	N/A

* Require a post cure at 60°C minimum.

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 the RESOLTECH 1040.

The system can be applied by 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.

The 1041SL, 1041HT & 1042HT hardeners require a cure at 60°C minimum.

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

CURING

Workshop conditions: 18 to 25°C, 70% humidity maximum.

HARDENER	POT LIFE /150g/25°C	RELEASE TIME	OPTIMAL CURE
1041SL	2 H 30	8 H w/cure @ 60°C	2H @80°C + 3H @120°C
1041HT	1 H 30	8 H w/cure @ 60°C	2H @80°C + 3H @120°C
1042HT	1 H 30	8 H w/cure @ 60°C	2H @80°C + 3H @120°C
1043	8 H	20 H w/cure @ 22°C	14days @20°C or 15H @60 °C
1046	1 H 30	16 H w/cure @ 22°C	14days @20°C or 15H @60 °C
1048	40 MN	8 H w/cure @ 22°C	14days @20°C or 8H @60 °C

PHYSICAL PROPERTIES

PRODUCT	DESIGNATION	VISCOSITY	MIX. VISCOSITY	MIX. DENSITY
1040	Resin system	1500 mPAs	N/A	N/A
1041SL	Extra slow	80	450 mPAs	1.1 g/cm ³
1041HT	Super slow	80	450	1.1
1042HT	Super slow	11	300	1.1
1043	Slow	15	300	1.1
1046	Medium	50	400	1.1
1048	Fast	45	400	1.1

MECHANICAL PROPERTIES

SYSTEM	1041SL	1041HT	1042HT	1043	1046	1048
Tensile strength	55	55	55	68	65	65
Tensile modulus	3700	3600	3600	3500	3600	3600
Flexural strength	110	100	100	108	100	100
Flexural modulus	3000	3300	3300	3400	3300	3300
TG °C	140	144	144	90	90	90

Above values given in MPa.

PACKING, TRANSPORT & STORAGE

Resoltech 1040 is available as follow (including resin and hardener):

1041SL	1.30kg, 6.50kg, 39kg, 260kg.
1041HT	1.30kg, 6.50kg, 39kg, 260kg.
1042HT	1.20kg, 6.25kg, 37.5kg, 262.50kg.
1043	1.5kg, 6.75kg, 40.5kg, 270kg.
1046	1.24kg, 6.20kg, 37.2kg, 248kg.
1048	1.22kg, 6.1kg, 36.6kg, 244kg.

Shelf life is one year in sealed containers as provided. Keep containers sealed and away from heat and cold.

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.

More information is available on www.resoltech.com.

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.



resoltech
ADVANCED COMPOSITE TECHNOLOGY

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