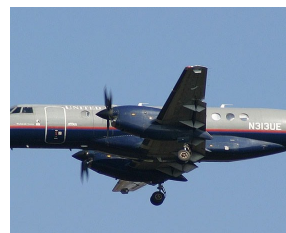


RESOLTECH 1090 FRT

Hardener 1093 HTD

Self-extinguishing epoxy system

- Low viscosity & reactivity epoxy system
- Low settling tendency
- Improved wettability
- Tg up to 80°C



1090 FRT -1093 HTD is a self-extinguishing epoxy resin system. It is possible to produce **structural composite parts** with all current reinforcements and core materials.

Thanks to its **low viscosity** and its **reactivity**, **1090 FRT** can be laminated by traditional wet processes such as filament winding and hot forming. Hardener 1093 HTD is proportioned in the ratio of 19 parts hardener to 100 parts resin (by weight) and gives good glass transition temperature (80°C). Once hardened, the parts can be **released from the mould without post curing**.

The optimal thermomechanical properties are obtained after an adapted cycle of curing. However, **post-curing is not essential** depending on the final use of the parts.

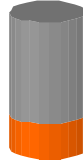
Resin 1090 FRT

Hardener 1093 HTD

MIXING RATIO

By weight

Resin 1090 FRT **100**
Hardener 1093 HTD **19**



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**.

APPLICATION

It is recommended these products are **used at a temperature close to 25°C** in order to facilitate mixing and the impregnation of reinforcements. Lower temperatures increase the viscosity of the mixture. On the contrary, a higher temperature decreases the viscosity of the mixture.

Thanks to its **low viscosity** and to its **good absorptivity**, system 1090 FRT - 1093 HTD is adapted to many applications including : structural laminating, infusion, wet lay up, pre-impregnated applications and filament winding

PHYSICAL CHARACTERISTICS @ 25°C

Visual Apperance

1090 FRT : Thixotropic light brown liquid
1093 HTD : Colourless transparent liquid
Mix : Thixotropic light brown liquid

Densities

References	Min	Max
1090 FRT	1.35	1.45
1093 HTD	0.90	1.00
Mix	1.25	1.35

Resin 1090 FRT

Hardener 1093 HTD

Viscosities (mPa.s)

References	Min.	Max.
1090 FRT	10 000	20 000
1093 HTD	10	100
Mix	500	5000

PHYSICAL CHARACTERISTICS @ 25°C

Reactivity

References	1090 FRT / 1093 HTD
Pot life (70mL)	8h
Temperature at exothermic peak	33.5°C

CURING & POST-CURING

While a post-cure is not mandatory, in order to obtain a material with maximum mechanical properties and a TG of 80°C, it is necessary to post-cure with a cycle of : 24h at ambient temperature (20-25°C) + 4h at 80°C.

MECHANICAL CHARACTERISTICS

Flexural properties

Flexural Modulus : **22.2 GPa**

- Properties obtained with a Resin / Glass ratio by weight : 0.72 / 1
- Composites made with 5 layers of 600g/m² & 1090 FRT / 1093 HTD epoxy system

Resin 1090 FRT

Hardener 1093 HTD

LABELLING

1090 FRT



Irritant



Dangerous for
the environment

1093 HTD



Corrosive

PACKAGING

- 1.19kg kit (1+0.19)kg
- 5.95kg kit (5+0.95)kg
- 29.75kg kit (25+4.75)kg
- 238kg kit (200+2x19)kg

STOCKAGE

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. Please read our standard health and safety sheet for more information. In case of eye contamination, wash with water and seek medical advice..

PLEASE NOTE : The data provided in this document is the result of our laboratory 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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