

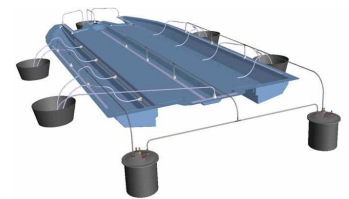
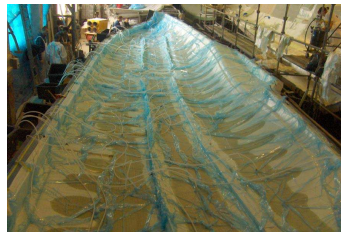
RESOLCOAT 7090

Hardeners 7091 (T) & 7096 (T)

Technical Data Sheet - 16/06/2010

High TG Epoxy GELCOAT

- High T_g 150°C
- High mechanical properties
- Clear or coloured versions for Tooling & parts manufacturing



RESOLCOAT 7090 epoxy gelcoat is high TG gelcoat specially formulated for the production of tooling and structural composites parts requiring high TG and service temperatures up to **150°C**.

Two hardeners are available depending on the pot life needed (90 min or 20 min)

The hardeners may be order with a medium thixotropy (7091 & 7096) for parts manufacturing where 300 microns gelcoat is enough, or with a higher thixotropy (7091T & 7096T) for tools production where thicknesses of 600 microns are optimum.

In both cases, the gelcoat may be ordered in its clear version (mainly for parts) or coloured version for tools production.

This new generation system, optimized with **low viscosity, high thixotropy and excellent air release**, is suitable for the manufacture of large tools and composite parts.

It can be applied by brush roller or airless while guaranteeing low toxicity working conditions to the users. Laminates can be released from the moulds after a low temperature cure cycle (8h @ 50°C) before post curing.

Resolcoat 7090 is compatible with pre-pregs that maybe applied on the gelcoat after a room temperature cure only. Post-curing of the pre-preg laminate should be done within a week.

Gelcoat 7090

Hardeners 7091 (T) & 7096 (T)

High TG Epoxy Gelcoat

MIXING RATIO

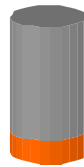
CLEAR VERSION

Resin 7090 Clear	100 pbw
Hardener 7091 (T)	30 pbw
Hardener 7096 (T)	25 pbw



COLOURED VERSION

Resin 7090 coloured	100 pb
Hardener 7091 (T)	20 pbw
Hardener 7096 (T)	15 pbw



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 gelcoats applies this system. The 7090 system can be applied by brush, roller, or airless gelcoater.

At room temperature the 7090 gelcoat will harden enough to enable laminating or placing pre-pregs onto it without having to cure it with temperature. Yet its degree of reticulation will be very low. This enables the application of pre-pregs or wet layup on this hardened surface while ensuring a good chemical and mechanical bond between coats.

During the postcure of the part or tool, the gelcoat will reach its full reticulation at the same time as the laminate creating the necessary bond between layers

It is recommended to have workshop temperature conditions between **18-25°C** in order to facilitate the mixing and the application.

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.

Gelcoat 7090

Hardeners 7091 (T) & 7096 (T)

PHYSICAL CHARACTERISTICS @ 23°C

Visual aspect

7090 Clear :Clear gel
7091 & 7096 :clear liquid.
7091 (T) & 7096 (T) :Clear to opalescent gel
Mix :Clear to opalescent gel .

7090 Coloured :Coloured gel
7091 & 7096 :clear liquid.
7091 (T) & 7096 (T) :Clear to opalescent gel
Mix :Coloured gel .

Density

REFERENCES	7090 Clear	7091 (T) & 7096 (T)	Mix
DENSITY	1.2	0,95	1,1

REFERENCES	7090 Coulored	7091 (T) & 7096 (T)	Mix
DENSITY	1.42	0,95	1,35

Viscosities @ 25°C

GC HT 180 : Gel
GC HT 185 : 80 to 200 mPa.s
MIX : Gel

REACTIVITY & CURING

Reactivity measures on Trombotech @ 25°C

7090 Clear or Coloured + 7091 (T)

Pot life for 150 gr: 1 H 30 mn
Touch dry: 8 to 12h
Hard & sandable: 8 Hours @ 60 °C
Full cure: 14 days and/or 15 Hours @ 60°C + 6 H @ 90°C

7090 Clear or Coloured + 7096 (T)

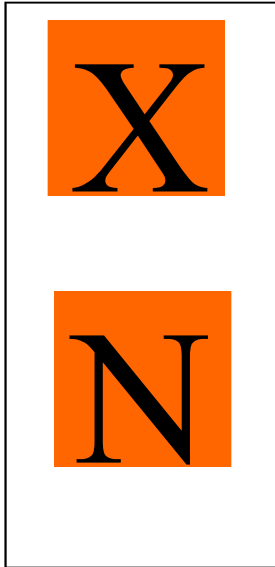
Pot life for 150 gr: 15 to 20 min.
Touch dry: 3 to 6h
Hard & sandable: 8 Hours @ 60 °C
Full cure: 14 days and/or 15 Hours @ 60°C + 6 H @ 90°C

Gelcoat 7090

Hardeners 7091 (T) & 7096 (T)

LABELLING

7090



7091 (T) & 7096 (T)



PACKAGING

7090 Clear + 7091(T):

(1kg+0,3kg) (5kg+1,5kg) (25kg+7,5 kg)

7090 Clear + 7096(T):

(1kg+0,25kg) (5kg+1,25kg) (25kg+6,25 kg)

7090 Coloured + 7091(T)

(1kg+0,2kg) (5kg+1kg) (25kg+5 kg)

7090 Coloured + 7096(T)

(1kg+0,15kg) (5kg+0,75kg) (25kg+3,75kg)

TRANSPORT & STORAGE

Shelf life is one year in sealed containers as provided. Keep containers 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..