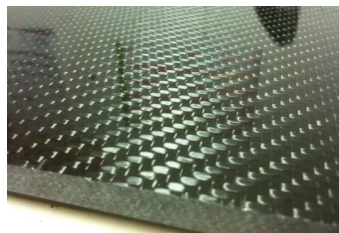
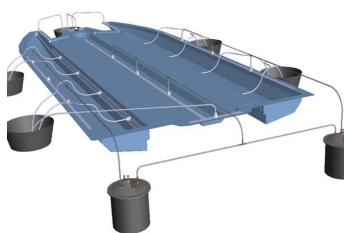


RESOLTECH HTG-240

Hardener HTG-245

High T_G structural infusion epoxy system

- High $T_G > 240^\circ\text{C}$
- Low viscosity and high wetting out properties
- High thermomechanical properties



RESOLTECH HTG-240 / HTG-245 epoxy system is very high T_G resin specially formulated for the production of **tooling and large structural** composites parts requiring T_G 's and service temperatures up to **240°C** .

Due to its **low viscosity, high wetting properties and excellent air release**, this system is suitable for the manufacture of structures and composite parts by infusion, injection while guaranteeing low toxicity working conditions to the users. The stable low viscosity vs temperature makes the HTG-240 system a prime choice for infusion process.

This system guarantees **high inter-laminar** properties and impact resistance thanks to its **exceptional wetting properties** even on aramid reinforcements.

Laminates can be released from the moulds after a low temperature cure cycle (8h at 40°C recommended). Final thermo-mechanical properties will be obtained after a post curing cycle defined later in this technical datasheet.

High TG infusion epoxy resin system

MIXING RATIO

System	HTG-240 / HTG-245
Mixing ratio by weight	100 / 24

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 this system. The HTG-240 / HTG-245 system can be infused or injected.

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

PHYSICAL CHARACTERISTICS

Visual aspect

HTG-240 : Opalescent neutral to light yellow liquid
HTG-245 : Neutral to transparent yellow liquid
Mix : Neutral to transparent yellow liquid

Densities according to ISO 1675 (± 0.05)

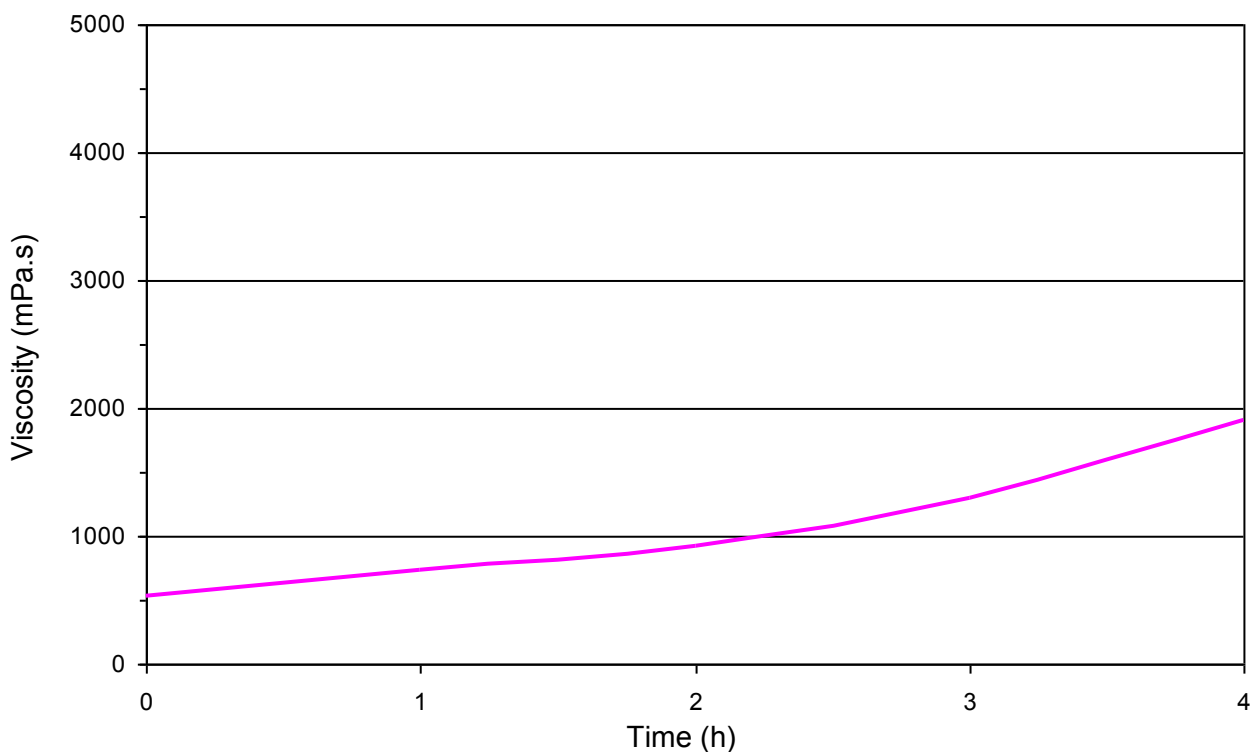
References	HTG-240	HTG-245	Mix
Densities at 23°C	1.17	0.95	1.13

Viscosities according to ISO 12058.2 ($\pm 15\%$)

References	HTG-240	HTG-245	Mix
Viscosities at 23°C (mPa.s)	6000	15	550

Hardener HTG-245

Viscosity evolution



Measurements realized at 23°C in test tubes of 180mm high and 18mm diameter (~40g)

REACTIVITY

System	HTG-240 / HTG-245
Pot life on 70mL at 23°C (~4cm thickness)	10h15min
Temperature at exothermic peak on 70mL at 23°C	31.9°C
Pot life in 2mm film at 23°C	10h20min

Measurements realized on Rheotech®

CURE & POST CURING

The following data indicates the T_G obtained with different post-curing cycles. The first cycle is considered as « minimum » in order to release from the mould.

Resin HTG-240

Technical Datasheet - v3.0 - 20.07.2016
Previous version - 18.06.2014

Hardener HTG-245

System	HTG-240 / HTG-245	
Curing cycles	8h at 40°C	8h at 40°C + 3h at 90°C + 3h at 120°C + 3h at 150°C + 1h at 200°C
T _g measured	66°C	239°C

T_g mesurées au Kinetech®

MECHANICAL CHARACTERISTICS

System	HTG-240 / HTG-245	
Curing cycles	8h at 40°C	8h at 40°C + 3h at 90°C + 3h at 120°C + 3h at 150°C + 1h at 200°C
Flexural modulus	3.38 GPa	3.56 GPa
Flexural strength at break	77.4 MPa	89.2 MPa
Elongation at break	2.36 %	2.95 %
Shore D Hardness	88	93

Flexion according to ISO 178

Hardness according to ISO 868

Resin HTG-240

Hardener HTG-245

PACKAGING

Available kits of HTG-240 / HTG-245 :

- 1.24kg : (1+0.24)kg
- 5.2kg : (4.2+1)kg
- 26kg : (21+5)kg
- 248kg : (200+2x24)kg
- 1007kg : (812+195)kg

TRANSPORT & STORAGE

Keep containers sealed and away from heat and cold preferably between 10°C and 30°C in a well ventilated area. Our products are guaranteed in their original packaging (check expiry date stated on the label).

HEALTH & SAFETY

Skin contact must be avoided by wearing protective nitrile gloves & overalls or other protective clothing. Eye protection should be worn to avoid risk of resin, hardener, solvent or dust entering the eyes. If this occurs flush the eye with water for 15 minutes, holding the eyelid open, and seek medical attention. Ensure adequate ventilation in work areas. Respiratory protection should be worn with ABEKP coded filters. RESOLTECH issues full Material Safety Data Sheet for all hazardous products. Please ensure that you have the correct MSDS to hand for the materials you are using.

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.