

RESOLCOAT GC HT210 BLACK

Hardener GC HT216

High TG Epoxy Gelcoat

- High T_G 210°C
- Adapted rheology



RESOLTECH GC HT210 BLACK / GC HT216 epoxy system is a very high T_G epoxy gelcoat specially formulated for the production of tooling and large structural composites parts requiring high glass transition temperature and services temperatures up to **210°C**.

This new generation system is suitable for the manufacture of large moulds structures and composite parts. Laminates or moulds can be released after a low temperature cure cycle (8h at 50°C). Final thermo-mechanical properties will be obtained after a post curing cycle defined according later in this technical data sheet.

MIXING RATIO

System	GC HT210 BLACK / GC HT216
Mixing ratio by weight	100 / 15
Mixing ratio by volume	100 / 28

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 mechanically stirred during no less than 5 minutes to ensure full homogeneity.**

High TG Epoxy Gelcoat

APPLICATION

The standard procedure of working with epoxy systems applies to this system. The gelcoat can be applied by brush or by roller.

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

GC HT210 BLACK	:	Black filled liquid
GC HT216	:	Transparent liquid
Mix	:	Black viscous liquid

Densities according to ISO 1675 (± 0.05)

References	GC HT210 BLACK	GC HT216
Density at 23°C	1.71	0.92
Mixed density at 23°C	1.61	

Viscosities according to ISO 2555 ($\pm 15\%$)

References	GC HT210 BLACK	GC HT216
Viscosity at 23°C(mPa.s)	150 000	25
Mixed viscosity at 23°C (mPa.s)	13 000	

REACTIVITY

System	GC HT210 BLACK / GC HT216
Reactivity on 70mL at 23°C (thickness ~4cm)	9h30min
Time at exothermic peak on 70mL at 23°C	7h30min
Temperature at exothermic peak on 70mL at 23°C	29°C
Gel time on 2mm film at 23°C	9h40min

Measurements made with Rheotech®

Resin GC HT210 BLACK

Technical Datasheet - V2 - 11.07.2016
Previous version - 01.08.2012

Hardener GC HT216

CURING & 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.

Curing Cycles	T_G (°C)
24h at 23°C	Brittle
Minimum : 8h at 50°C	74°C
8h at 50°C + 3h at 90°C + 3h at 120°C + 3h at 150°C	172°C
8h at 50°C + 3h at 90°C + 3h at 120°C + 3h at 150°C + 1h at 200°C	205°C T_{Gmax} : 223°C

T_G measurements made by Kinetech® (DMA type)

PACKAGING

Available kits :

- 1.15kg : (1+0.15)kg
- 6.9kg : (6+0.9)kg
- 34.5kg : (30+4.5)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.