

## Resin EP 501 Hardener H 504US

### FEATURES

- Long working time
- Good mechanical properties

### COMPOSITION

- Part A: epoxy resin EP501
- Part B: hardener H504US



High performance laminating epoxy system for large composite structures. Low viscosity and long working time, specifically designed for the production of glass, aramid or carbon fiber composites, made by manual layering, with or without the vacuum bag technique. The system has good mechanical properties both with polymerization at room temperature and with post-curing at moderate temperatures.

### APPLICATIONS

- Large composite materials.

### TYPICAL PROPERTIES

Specifications writers: These values are not intended for use in preparing specifications. Please contact your local sales representative prior to writing specifications on this product.

Properties	Unit	Value
Aspect Part A/Part B	Visual	Liquid
Color Part A/Part B	Visual	Straw / Colorless
Density at 23°C Part A/Part B	g/cm <sup>3</sup>	1.14 / 0.95
Viscosity at 23°C Part A/Part B	mPa.s	1600 / 11
Mix ratio Part A/Part B	pbw	100 : 32
Pot life (150g at 23°C)	Hours	6
Gel time (150g at 23°C)	Hours	8
Demoulding 3mm at 23°C	Hours	42
Demoulding 3mm at 60°C	Hours	3 – 4
Exothermic peak (150g)	°C	34
Hardness	Shore D	82
Flexural modulus	MPa	2810
Flexural strength	MPa	99.1
Tensile strength	Mpa	69.7
Elongation at break	%	11.0
Compressive modulus	MPa	508
Compressive strength	MPa	25.7
Linear shrinkage [500x50x10mm]	%	0.4
Tg	°C	66

### SETTINGS

Check and, if necessary, homogenize the components before use. Epoxy resins tend to crystallize at temperatures below 25°C. In the presence of partial or total crystallization, heat in the oven at 40-60°C until complete melting. Avoid local overheating.

### MIXING

Weigh resin and hardener in the indicated ratio and mix until a homogeneous compound is obtained.

**Warning!** Epoxy resins and amines can generate a highly exothermic, uncontrolled reaction, with decomposition above 250°C. Prepare limited quantities of material and proceed with application.

## POTLIFE E GELTIME

The Potlife or time of use of the mixture is normally the time required for an increase equal to twice the initial viscosity. Both Pot-life and Gel-time depend on mass and temperature: the greater the mass, the faster the reaction will be. The higher the temperature, the faster the reaction.

## CURING

The system cures at room temperature but in order to reach stability at high temperatures, a post-curing cycle in an oven, in a mold or on a conformer is recommended.

Opzion I: 24 hrs at 25°C+4 hrs at 80°C  
Opzion II: 24 hrs at 25°C+8 hrs at 50°C

Recommended temperature ramp:  
heating: 1°K/min  
cooling: 1°K/min.

## HANDLING PRECAUTIONS

The information for a correct and safe handling of the products are contained in the safety data sheet. Consult the safety data sheets before use for complete information on the risks for health and environment and for suitable protective devices to be adopted. Share the safety data sheets with all the staff involved in the use of the products.

## PACKAGING

EP501 resin is supplied in 20kg, 200kg containers; H504US hardener is supplied in 4kg, 24kg, 200kg containers.

## USABLE LIFE - STORAGE

Store in the original, unopened containers at a temperature between +15°C and +35°C. Epoxy resins have a pronounced tendency to crystallize at temperatures below 25°C. Hardeners are sensitive to moisture: be sure to close containers after use. This material, when stored under the specified conditions, has a shelf life of 24 months from the date of manufacture.

## LIMITATIONS

This product is neither tested nor represented as suitable for food contact, skin contact or medical uses.

## LIMITED WARRANTY

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