Product Information

Composites

Resin EP850A Hardener EP850B

FEATURES

- Very good mechanical properties
- Surface finish

COMPOSITION

- Part A: epoxy resin EP850A
- Part B: hardener EP850B

High performance two-component epoxy system specifically designed for the production of glass, aramid or carbon fiber composites, made by manual stratification, RTM infusion, press moulding. EP 850 guarantees an excellent surface finish and high mechanical properties after post-curing at moderate temperatures (80°C).

APPLICATIONS

- Designed for wind turbines, automotive, sporting goods.

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 / Yellow
Density at 23°C Part A/Part B	g/cm^3	1.14 / 0.98
Viscosity at 23°C Part A/Part B	mPa.s	6000 / 20
Mix ratio Part A/Part B	pbw	100 : 35
Density at 23°C Mixture	g/cm^3	1.10
Viscosity at 23°C Mixture	mPa.s	400
Pot life (150g at 23°C)	Minutes	40
Gel time (150g at 23°C)	Minutes	65
Gel time (1000g at 23°C)	Minutes	60
Onset [DSC]	°C	73.73
Normalized [DSC]	J/g	405.42
Integral [DSC]	mJ	9211.04
Peak [DSC]	°C	111.70
Hardness	Shore D	82
Flexural modulus	MPa	3030
Flexural strength	MPa	111
Tensile strength	MPa	74.7
Elongation at break	%	11.0
Linear shrinkage [500x50x10mm]	%	0.08
Glass transition (DSC)	°C	80

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.

4 hours at 60°C+
2 hours at 80°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

EP850A resin is supplied in 21,8kg containers; EP850B hardener is supplied in 3,8kg 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

The information contained in this document is offered in good faith based on Chemix research and is believed to be accurate. However, as the conditions and methods of use of our products are beyond our control, this information should not be used as a substitute for the tests that customers must first perform to ensure that Chemix products are fully satisfactory for their specific applications. The warranty is only applicable to the values indicated in the Product Sales Specifications. The sole and exclusive compensation for products with values that are out of specification is limited to the replacement of the product or the refund of the purchase price.

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