

Basis	<b>temperature resistant laminating resin</b>
Resin	<b>AH 140</b>
Hardener	<b>TC 90</b>
Colour	yellow transparent

### Applications

- Hand laminating
- Vacuum infusion
- carbon fibre sight laminates
- Laminates for boatbuilding
- Laminates for automotive industry
- Laminates for aeronautic

### Properties

- unfilled
- very thin liquid
- long processing time
- high heat resistance
- high strength
- excellent wet-out characteristics

### Processing data

Product		Mixture AH 140 / TC 90	Resin AH 140	Hardener TC 90
Colour		yellow transparent	transparent	yellow transparent
<b>Mixing ratio</b>	<b>p. b. w.</b>		<b>100</b>	<b>32</b>
Viscosity at 25°C	mPas	370 ± 75	1000 ± 200	20 ± 5
Density at 20°C	g / cm <sup>3</sup>	1,10 ± 0,02	1,17 ± 0,02	0,93 ± 0,02
Pot life 200 g / 20°C	min.	90 - 105	-	-
Curing time at RT	hrs.	48 - 72	-	-
Post curing	Time in h/ Temperature in °C	4 - 6 / 60 5 - 6 / 80	-	-

### Physical data

Properties	Inspect. requirem.	Unit	Value
Flexural strength	EN ISO 178	MPa	125 ± 10
Flexural strength at breakage	EN ISO 178	%	6,5 ± 0,2
Flexural modulus	EN ISO 178	MPa	2900 ± 300
Flexural strength at breakage	ISO 37	%	-
Impact resistance (Charpy)	EN ISO 179	kJ/m <sup>2</sup>	27 ± 4
Compressive strength	EN ISO 604	MPa	115 ± 10
Heat resistance (HDT)	DIN EN ISO 75 B	°C	100 ± 3 / at 8 h 120°C 98 ± 3 / at 8 h 80°C
TG in TMA T <sub>g</sub>	Methode TMA	°C	ca. 114
Shore hardness	DIN 53505	Shore D	87 ± 3
Coefficient of linear expansion	DIN 53752	10 <sup>-6</sup> K <sup>-1</sup>	-
Linear shrinkage	internal	%	-

### Sales units (packages)

Units	Resin	AH 140	5,000 kg / 10,000 kg / 25,000 kg / 50,000 kg / 220,000 kg
	Hardener	TC 90	1,600 kg / 5,000 kg / 50,000 kg

## Processing instructions

The temperature of material and processing should be between 18 and 25° C.  
The mixing of resin and hardener should be made intensively and if possible without any bubbles at room temperature.

Additional details for post curing:

Typical curing

a) Laminates 2 - 5 mm

- 24 h at RT

- 2 - 4 h at 40°C

- 4 h at 60°C

- 5 h at 80°C

b) Laminates 5 - 10 mm

- 24 h at RT

- 4 - 6 h at 60°C

- 5 - 6 h at 80°C

We recommend a post curing with a temperature rise of about 10°C/hour. Difficult geometries should be supported during the curing cycle. Afterwards the part should be cooled down at about 20°C/hour.

## In General

**ebalta** AH 140 is a very thin liquid two-component-epoxy resin with high values of strength and high heat resistance. Due to its very good impregnating and wetting properties it is suitable as laminating resin for high-strength components with fabrics of glass –or carbon fiber.

Especially for thin laminates, a post-curing of 16 hours at 80°C, after curing at room temperature, is essential in order to guarantee a complete curing. Otherwise the non post-cured laminate will be brittle and the adhesion of the layers with each other will not be sufficient.

## Storing

At appropriate storage 18-25°C.

Occuring crystallization due to disadvantageous storage conditions can be made return by warming up the material at approx. 60° C.

Opened containers should be closed immediately after use and be protected against moisture. This material should be used up as soon as possible.

Shelf life is indicated on the labels

## Safety measure

Please follow the precaution instructions of the Government Safety Organisation of the chemical industry when working with this material. Please follow safety advices !

## Waste Disposal

According to arrangement with local authorities cured material can be disposed as domestic or commercial waste.

Non-cured products are waste which is subject to inspection and has to be disposed accordingly.

In case of further questions please do not hesitate to contact our Department for Product Safety.

The instructions and recommendations are given in good faith and are based on long experience and careful tests. Since the conditions of use are beyond our control, and due to versatility of applications and working methods, we can't give any guarantee. All information are non-binding and are no guarantee for special characteristics or properties of the product. Despite information given from **ebalta** the customer has to make his own tests regarding applications and processing. If any special warranty is requested, written agreement on this subject is essential.

**ebalta** UK Limited . B2 Langham Park, Trent Lane . Castle Donington . Derbyshire DE74 2UT  
t: +44 1332 814700 . f: +44 1332 814775 . e: info@**ebalta**.co.uk . w: www.**ebalta**.co.uk