

Basis	high temperatur resistant laminating resin
Resin	LH 28-1
Hardener	TM
Colour	brown transparent

### Applications

- Vacuum forming tools
- Prepreg tool
- Heat solvent probes
- Blow moulds
- Polyesterinjection mold
- Polyester press tool

### Properties

- very high heat resistance
- long processing time
- low exothermic character
- heat curing

### Processing data

Product		Mixture LH 28-1 / TM	Resin LH 28-1	Hardener TM
Colour		brown transparent	brown transparent	brown transparent
<b>Mixing ratio</b>	<b>p. b. w.</b>		<b>100</b>	<b>40</b>
Viscosity at 25°C	mPas	750 ± 100	800 ± 150	375 ± 75
Density at 20°C	g / cm <sup>3</sup>	1,10 ± 0,03	1,15 ± 0,03	0,97 ± 0,02
Pot life 200 g / 20°C	min.	240 - 360	-	-
Curing time at RT	hrs.	24 - 48	-	-
Post curing	Time in h/ Temperature in °C	4 / 40 4 / 60 4 / 100 4 / 135	-	-

### Physical data

Properties	Inspect. requirem.	Unit	Value
Flexural strength	EN ISO 178	MPa	95 ± 10
Flexural modulus	EN ISO 178	MPa	2800 ± 250
Flexural strength at breakage	EN ISO 178	%	4 ± 0,6
Compressive strength	EN ISO 604	MPa	85 ± 8
Impact resistance (Charpy)	EN ISO 179	kJ/m <sup>2</sup>	16 ± 6
Heat resistance (HDT)	DIN EN ISO 75 B	°C	158 ± 3
TG in TMA T <sub>G</sub>	Methode TMA	°C	175
Shore hardness	DIN 53505	Shore D	85 ± 3

### Sales units (packages)

Packing size	A-Pack	LH 28-1 / TM	Resin 9 x 0,600 kg / Hardener 9 x 0,240 kg = 7,560 kg
Units	Hardener	LH 28-1	20,000 kg
	Hardener	TM	8,000 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.

## In General

**ebalta** LH 28-1 is a two components epoxy laminating resin, precuring at room temperature and, depending on postcuring, can be used till 175°C.

Since this laminating resin system contains no fillers, it has got good wetting properties and makes a high glass fabric content possible. This leads to a low coefficient of thermal expansion and high strength.

Together with aluminium granules, **ebalta** LH 28-1 is suitable for back filling of heat resistant moulds and moulding tools. At room temperature the curing takes 7 days and the material can only be used for applications till 60°C.

Through step-by-step curing a high heat resistance will be reached. Cool down slowly to room temperature!

Glass transition temperature (TG) 95°C: After postcuring 4 hrs. at 40°C + 4-10 hrs. at 60°C

Glass transition temperature (TG) 139°C: After postcuring 4 hrs. at 40°C + 4-10 hrs. at 60°C + 4 hrs. at 100 °C

Glass transition temperature (TG) 175°C: After postcuring 4 hrs. at 40°C + 4-10 hrs. at 60°C + 4 hrs. at 100°C + 4 hrs. at 135°C

We recommend to perform the complete postcuring on the master model, at least the first one should be made this way.

## Storing

Storage at room temperature (18-25 °C) in closed original container 6 months.

Any crystallization occurring under bad storage conditions regarding hardener TM, can be neutralized by heating the material up to 60°C.

Close open containers after use, keep away from moisture and use up immediately.

## 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.

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