

Basis	Heat resistant tooling resin
Resin	GH 705
Hardener	TL-1
Colour	alu grey

Applications

- PU-foaming tools
- RIM foam tools
- Vacuum forming tools
- Heatable foundry patterns

Properties

- aluminium-like
- high heat resistance

Processing data

Product		Mixture GH 705 / TL-1	Resin GH 705	Hardener TL-1
Colour		alu grey	alu grey	yellowish transparent
Mixing ratio	p. b. w.		100	10
Viscosity at 25°C	mPas	4000 ± 500	12000 ± 3000	35 ± 10
Density at 20°C	g / cm ³	1,70 ± 0,05	1,74 ± 0,03	0,940 ± 0,02
Pot life 200 g / 20°C	min.	65 - 75	-	-
Curing time at RT	hrs.	16 - 24	-	-
Post curing	Time in h/ Temperature in °C	8 - 12 / 60 - 80	-	-

Physical data

Properties	Inspect. requirem.	Unit	Value
Flexural strength	EN ISO 178	MPa	95 ± 5
Flexural elongation at break	EN ISO 178	%	2,00 ± 0,2
Flexural modulus	EN ISO 178	MPa	6700 ± 300
Impact resistance (Charpy)	EN ISO 179	kJ/m ²	14 ± 3
Compressive strength	EN ISO 604	MPa	85 ± 5
Shore hardness	DIN ISO 7619-1	Shore D	86 ± 3
Heat resistance (HDT)	DIN EN ISO 75 B	°C	91 ± 3
coefficient of linear expansion 10 - 80 °C	internatl test / Dilatometer	10 ⁻⁶ K ⁻¹	ca. 63
Linear shrinkage	internal	%	0,05

Sales units (packages)

Units	Resin hardener	GH 705 TL-1	8,000 kg / 20,000 kg 0,975 kg / 5,000 kg / 50,000 kg
-------	-------------------	----------------	---

Processing instructions

The temperature of material and processing should be between 18 and 25° C.

Filled systems should be stirred thoroughly before use.

After each use the containers have to be closed again.

Porous mould surfaces should be sealed before (**ebalta** sealant).

For an optimum mould release we recommend a suitable release agent (e.g. T 1-1) which can be easily applied with a brush.

The mould should be treated 2 or 3 times with release agent and allowed to evaporate for approx. 20 min after every application.

Mixing ratio resin/hardener according to instructions!

To get a clean component part, we recommend upward flow casting and to take care of sufficient venting.

Resin residues at stirring rods and so on can be easily cleaned with our ebclean.

In General

ebalta GH 705/TL-1 is a thick-castable, aluminium-filled, heat-resistant, two-components epoxy resin, which shows aluminium-like properties after curing at room temperature.

Due to high aluminium contents GH 705/TL-1 shows good thermal conductivity, is well workable and has a low linear expansion coefficient.

A thickness of about 30 mm can be casted, by adding massive aluminium granules thicknesses of more than 100 mm can be casted.

Maximum thermal stability of thin-wall casting parts is reached after immediate thermal treatment of 12-15 hrs. at 50-60°C after curing at room temperature. The thermal treatment can also be made by slow heating up to working temperature. At a casting thickness of more than 80 mm an automatic thermal treatment happens by formation of heat of reaction.

Curing time:

10 mm thickness: 12 hrs..

50 mm thickness: 6 hrs.

100 mm thickness: 4 hrs.

Demoulding depending on layer thickness, geometry and room temperature. Check for individual case.

Full chemical and mechanical stress not before 7 days after curing at room temperature.

Physical properties basing on test pieces being postcured for 8 hrs. at 80°C. Temperature resistance HDT approx. 52°C for curing at room temperature.

Storing

Storage at room temperature 18-25 °C.

Opened containers should be closed immediately after use and should be used up as soon as possible.

Shelf life: see 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.