

Basis	Polyurethane systems for rapid prototyping
Resin	MG 707 Comp. A (isocyanate)
Hardener	Z 400 Comp. B (polyol)
Colour	white
Further hardeners	Z 460

Applications

- High quality prototypes like PP/PE
- Vehicle construction
- Domestic articles
- Consumer goods

Properties

- high impact strength
- good flexural strength
- Working temperature range from -40°C until 100 °C
- long processing time
- RoHS conform

Processing data

Product		Mixture MG 707 / Z 400	Resin MG 707 Comp. A (isocyanate)	Hardener Z 400 Comp. B (polyol)
Colour		white	colourless	white
Mixing ratio	p. b. w.		100	30
Viscosity at 25°C	mPas	-	500 ± 100	1200 ± 300
Density at 20°C	g / cm ³	1,12 ± 0,02	1,12 ± 0,02	1,1 ± 0,02
Pot life 200 g / 20°C	min.	8 - 12	-	-
Curing time at 50° C	min.	40 - 45 / with 5 mm wall thickness	-	-
Post curing	Time in h/ Temperature in °C	12 / 100	-	-

Physical data

Properties	Inspect. requirem.	Unit	Value
Flexural strength	EN ISO 178	MPa	63 ± 5
Flexural elongation at break	EN ISO 178	%	-
Flexural modulus	EN ISO 178	MPa	1500 ± 200
Tensile strength	EN ISO 527-1	MPa	46 ± 5
Elongation of tensile strength	EN ISO 527-1	%	12 ± 1
Impact resistance (Charpy)	EN ISO 179	kJ/m ²	24 ± 10
Impact resistance	ASTM D - 256	J/m	530 ± 45 at 20° C 530 ± 45 at - 40° C
Heat resistance (HDT)	DIN EN ISO 75 B	°C	107 ± 3
TG in TMA T _G	Methode TMA	°C	120
Shore hardness	DIN ISO 7619-1	Shore D	79 ± 2 at 20° C 77 ± 2 at 70° C 73 ± 2 at 100° C
Linear shrinkage	internal	%	-

Sales units (packages)

Units	Resin	MG 707 Comp. A (isocyanate)	1,000 kg / 5,000 kg
	Hardener	Z 400 Comp. B (polyol)	0,310 kg / 1,000 kg

Processing instructions

We recommend to evacuate each component separately and carefully.

After choosing required reactivity of the system, follow mixing ratios carefully.

If casting is not made in a vacuum pouring plant, the finished mixture has to be evacuated before casting.

The product can be cast in polyaddition- and in polycondensation-curing rubber moulds, as well as in polyurethane and epoxy-moulds, which have to be treated with release agents.

Thermal treatment

This processing is applied to achieve optimum mechanical and thermal properties.

For special geometrical moulds we recommend to use a supporting mould during the curing process.

Processing parameters: Mould temperature: 40 – 60 °C

In General

This product is a 2-components polyurethane material, which is cured thermally and used for prototypes. The four mentioned formulations differ in being filled or non-filled and their mechanical properties.

The B-components Z 400 (potlife 8-12 min.) and Z 460 (potlife 60-70 min.) are identical and can be mixed with each other to control the reactivity, e.g. potlife.

These combinations of Z 400 and Z 460 comp. B can be made any way as long as the totally required quantity of comp. B is observed (for each system).

The total amount of Z 400 and Z 460 always has to be 30 g for 100 g comp. A.

MG 707 can be coloured easily with the usual colour pastes.

Processing preferentially in customary vacuum pouring plants.

Normal processing is also possible.

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 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.