

Basis **Polyurethane systems for rapid prototyping**  
 Resin **MG 703 Comp. A**  
 Hardener **Z 400 Comp. B**

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

### Processing data

Product		Mixture MG 703 / Z 400	Resin MG 703 Comp. A	Hardener Z 400 Comp. B
Colour		white	colourless	white
<b>Mixing ratio</b>	<b>p. b. w.</b>		<b>100</b>	<b>31</b>
Viscosity at 25°C	mPas	-	600 ± 100	1200 ± 300
Density at 20°C	g / cm <sup>3</sup>	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 / bei 5 mm Wandstärke	-	-
Post curing	Time in h/ Temperature in °C	12 / 100	-	-

### Physical data

Properties	Inspect. requirem.	Unit	Value
Flexural strength	EN ISO 178	MPa	52 ± 5
Flexural modulus	EN ISO 178	MPa	1340 ± 150
Flexural strength at breakage	EN ISO 178	%	-
Tensile strength	EN ISO 527	MPa	40 ± 5
Breaking elongation (tensile)	EN ISO 527	%	25 ± 2
Compressive strength	EN ISO 604	MPa	-
Impact resistance (Charpy)	EN ISO 179	kJ/m <sup>2</sup>	77 ± 20
Impact resistance	ASTM D - 256	J/m	968 ± 75 bei 20° C 740 ± 75 bei - 40° C
Impact strength	ASTM D - 256	J/m	43 ± 4 bei 20° C 37 ± 4 bei - 40° C
Heat resistance (HDT)	DIN EN ISO 75 B	°C	81 ± 3
TG in TMA T <sub>G</sub>	Methode TMA	°C	105
Shore hardness	DIN 53505	Shore D	77 ± 2 bei 20° C 74 ± 2 bei 70° C 68 ± 2 bei 100° C
Linear shrinkage	internal	%	-

**Sales units (packages)**

Units	Resin	MG 703 Comp. A	1,000 kg / 5,000 kg
	Hardener	Z 400 Comp. B	1,000 kg / 5,000 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 muld 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 31 g for 100 g comp. A.

MG 703 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) in closed original container 6 months.

Already opened containers should be closed immediately after use and should be used as soon as possible.

## 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