

MG 707 / Z 460

Technical Datasheet



Polyurethane vacuum casting resin

Applications

small series in vacuum casting
vehicle construction
leisure industry
prototype parts

Properties

heat resistance 107 °C
Pot life einstellbar mit Z 400

Processing data

Product		Mixture	Resin	Hardener
		MG 707 / Z 460	MG 707 Comp. A (Iso)	Z 460 Comp. B (Polyol)
Colour		white	colorless	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	1,10 ± 0,02
Pot Life	minutes	60 - 70		
Demoulding time	minutes	170 - 180 / 50°		

Physical data

Properties	Inspect. Requirements	Unit	Value
Flexural strength	DIN EN ISO 178*	MPa	63 ± 5
Flexural modulus	DIN EN ISO 178*	MPa	1500 ± 200
Tensile strength	DIN EN ISO 527*	MPa	46 ± 5
Elongation at tensile strength	DIN EN ISO 527*	%	12 ± 1
Impact resistance (Charpy)	DIN EN ISO 179-1*	kJ/m ²	24 ± 10
Heat deflection temperature HDT	DIN EN ISO 75 B*	°C	107 ± 3
Glass transition TG	DSC	°C	ca. 120
Shore hardness	DIN ISO 48-4*	Shore D	79 ± 2

* based on

Sales units (packages)

MG 707 colourless comp. A, 1 kg bottle
Z 460 white, comp.B, 0,130 kg
MG 707 colourless comp. A, 5 kg can
Z 460 white comp. B, 1 kg bottle

additional products

Silastic (TM) RTV-4234-T4 translucent base 20 kg drum
Silastic (TM) RTV-4234-T4 O transparent Curing Agent 2 kg
Silastic (TM)RTV-4234-T4 transparent 2 kg curing agent

Processing instructions

Before use, the comp. A has to be stirred because additives tend to settle and leave a sediment. For an optimal manufacturing process, we recommend a material temperature of 30 °C and a mould temperature of 60 °C - 70 °C.

After casting, the mould should be stored in the oven at 60 °C - 70 °C until it is demoulded. If the processing temperatures are not maintained, the components can remain brittle and break during demoulding.

The demoulding time varies depending on the wall thickness and temperatures. Components with wall thicknesses of up to 10 mm can be manufactured. The shrinkage of manufactured components depends on factors such as geometry, wall thickness and temperature.

The shrinkage factors of different wall thicknesses can be provided on request. To achieve the values specified in the data sheet, the components must be post cured at 100 °C for 12 hours.

Post curing must be done in a support jig.

By mixing the two B-components Z 400 (potlife 8 - 12 min.) and

Z 460 (potlife 60 -70 min.), the potlife can be freely adjusted.

The total mixing ratio comp. A to B must be observed.

General

This material is optimized for processing in a vacuum chamber. However, it can also be applied by hand potting.

The casting moulds are typically made of addition-curing silicone.

We recommend Silastic™ RTV 4234 T4 as a suitable mould silicone.

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.

Please refer to the product labels for the shelf life of the material.

Safety measure

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

Please refer to the respective safety data sheets

Waste Disposal

The cured materials can be disposed of as household or commercial waste in consultation with the respective competent authority.

Uncured products must be properly disposed of in consultation with the competent authority.

For further questions, our product safety department is at your disposal.

Compliance & Legal

The information and recommendations provided are based on careful evaluation and practical experience. They reflect the state of our knowledge at the time of provision. Updates may be made without notice.

The information is intended as general guidance and does not constitute a warranty of specific characteristics or properties of the product. Due to the wide range of potential applications and processing methods, not all individual use cases can be covered.

The product must be used in accordance with the applicable safety and usage instructions. No liability will be accepted for improper use or application outside the intended purpose.

Unless otherwise agreed, it is the responsibility of the user to independently assess the suitability of the product for the intended application and processing method.

The information provided does not release the user from the obligation to seek individual advice in cases of uncertainty regarding specific applications.

Statutory warranty rights remain unaffected.