

MG 331 FR Comp. A + B

Technical Datasheet



Polyurethane RIM casting resin

Applications

small to medium series parts for:
vehicle construction

Properties

classification according to DIN EN 45545-2 railway vehicles	R22 HL 1, HL 2, HL 3
classification according to DIN EN 45545-2 railway vehicles	R23 HL 1, HL 2, HL 3
heat resistance	120 °C HDT

Processing data

Product		Mixture	Resin	Hardener
		MG 331 FR Comp. A + B	MG 331 FR Comp. A	MG 331 FR Comp. B
Colour		black	black	brown
Mixing ratio	p.b.w.		100	45
Viscosity at 25 °C	mPas	-	7700 ± 500	120 ± 20
Density at 20 °C	g/cm ³	1,3 ± 0,03	1,33 ± 0,03	1,23 ± 0,03
Pot Life	seconds	55 - 60		
Demoulding time	minutes	10 - 15		

Physical data

Properties	Inspect. Requirements	Unit	Value
Flexural strength	DIN EN ISO 178*	MPa	75 ± 5
Flexural elongation at break	DIN EN ISO 178*	%	3,9 ± 0,5
Flexural modulus	DIN EN ISO 178*	MPa	2700 ± 100
Compressive strength	DIN EN ISO 604*	MPa	66 ± 5
Impact resistance (Charpy)	DIN EN ISO 179-1*	kJ/m ²	14 ± 2
Heat deflection temperature HDT	DIN EN ISO 75 B*	°C	120 ± 3
Shore hardness	DIN ISO 48-4*	Shore D	82 ± 3

* based on

Sales units (packages)

MG 331 FR black comp.A, 5 kg
MG 331 FR black comp.A, 20 kg
MG 331 FR brown transparent comp.B 2.250 kg
MG 331 brown transparent comp. B, 9 kg

additional products

Release agent T 03-01 yellowish 1 ltr. bottle
Release agent T 03-01 yellowish 5 ltr. can

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Processing instructions

Before use, the comp. A has to be stirred because additives tend to settle and leave a sediment. The comp. B does not need to be stirred. For an optimal manufacturing process, we recommend a material temperature of 30 °C and a mould temperature of 40 °C - 50 °C. A 2-component mixing and dosing system is required for processing. Wall thicknesses of up to 4 mm are possible. Ribs or larger material accumulations up to 15 mm can also be produced. 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. The demoulding time varies depending on the wall thickness and temperatures. To achieve the values specified in the data sheet, the components must be post cured for 4 h / 80 °C + 2 h / 120 °C.

Postcuring must be done in a support jig.

General

The moulds should be made of a polyurethane or epoxy resin material with a high-quality surface. We advise against metal moulds. As a release agent, we recommend ebalta release agent T 03-1.

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.