



## Technical Data

### MP Advanced

High temperature epoxy laminating system with long pot life

#### Description

- Exceptionally high heat resistance
- Very good wetting-out characteristics due to low processing viscosity

#### Application

Suitable for parts and moulds in combination with reinforcements made of carbon and glass fibres.  
Required heat resistance < 200 °C



#### Processing

The components have to be mixed thoroughly with the stated mixing ratio. Heat curing is essential for the future properties of the part. We recommend to do an additional warming of the resin/hardener mixture (40 - 45 °C) in a water quench to further decrease the processing viscosity. The laminate should be pressed in vacuum process, if it's not manufactured in a closed and/or heated medium, to avoid the expiration of resin/hardener mixture out of the fabric layer.

Properties	Unit	Epoxy resin MP Advanced	Hardener MP Advanced
Colour		pale beige	pale yellow
Viscosity	mPa·s/25 °C	3000	160
Mixing viscosity	mPa·s/25 °C	2000	
Density	g/cm <sup>3</sup>	1,2	1,01
Mixing ratio	parts by weight	100	40
Pot life (Amount 500 g)	h	12	
Gelling time (Thickness layer > 0,5 mm)	h	18	



**Curing schedule:**

**Hand laminate / vacuum bagging**

**Pre-curing inside the mould:**

- 10 h at 100 °C
- **Cool off** to 60 °C + demoulding

**Heat curing outside the mould:**

- Temperature increase from 60 °C in 4 h to 140 °C, hold 2 h at 140 °C, increase in 0,5 h to 160 °C, hold 2 h at 160 °C, increase in 0,5 h to 180 °C, hold 2 h at 180 °C, increase in 0,5 h to 200 °C, hold 12 h at 200 °C
- **Cool off** with a decrease of 40 °C /h to room temperature

**RTM-/RI-Processing**

**Pre-curing inside the mould:**

- 2 h at 100 °C, increase in 0,5 h to 120 °C, hold 2 h at 120 °C, increase in 0,5 h to 140 °C, hold 2 h at 140 °C, increase in 0,5 h to 160 °C, hold 5 h at 160 °C
- **Cool off** to 60 °C + demoulding

**Heat curing outside the mould:**

- Temperature increase from 60 °C in 4 h to 140 °C, hold 2 h at 140 °C, increase in 0,5 h to 160 °C, hold 2 h at 160 °C, increase in 0,5 h to 180 °C, hold 2 h at 180 °C, increase in 0,5 h to 200 °C, hold 12 h at 200 °C
- **Cool off** with a decrease of 40 °C /h to room temperature

Properties of the cured matrix (unreinforced)	unit	value
Density	g/cm <sup>3</sup>	1,1
Hardness	Shore D	85
Flexural strength	MPa	88
Flexural modulus	MPa	3500
Compressive strength	MPa	153
Impact strength	kJ/m <sup>2</sup>	3
Glass transition temperature (Tg)	°C	238

All information, recommendations, and advice on the part of R&G Faserverbundwerkstoffe GmbH are published to the best of our knowledge and belief. They are noncommittal and contain neither explicit nor tacit assurance or warranty of particular properties. The values specified for properties are typical figures. Recommendations or advice serve to describe our products and possible applications in a general or exemplary, but not specifically individual manner. In the course of the constant technical advancement and improvement of our products there may be changes to the characteristic values, copy, and diagrams; no specific reference is made to any such change. Owing to our products' wide and highly diverse range of potential applications far beyond any of our attempts to analyse, the customer alone is responsible for examining our products' suitability for the respective processes and purposes and their respective processibility. All and any protective rights and the applicable laws, terms, and conditions must be observed by the buyer or user of our products at their own responsibility. Publication is not a licence and does not intend the violation of any patents.