



Tooling & Composites



Biresin® Composite resins for parts and moulds

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Subject to alterations in the course of technical progress and also subject to error.



Biresin® High performance Composite resins

Based on our experience in formulation and manufacture of thermosetting matrix systems we have developed an extensive product range of composite resins based on epoxy systems. Our materials can be used for mould making as well as parts production. Many applications are covered with the standard products and in addition we develop customized systems for special applications.



Biresin® CR80, CR81, CR120 and CR170 – High performance Composite resins with low viscosity for RTM and infusion processing

- Biresin® CR80 and CR81 for temperature range to 80°C
- Biresin® CR120 for temperature range to 120°C
- Biresin® CR170 for temperature range 160°C and processing at elevated temperatures
- High mechanical properties
- Good and fast wettability
- Biresin® CR81 especially for processing of big parts at low temperatures
- In each product series the hardeners have the same mixing ratio so they can be blended easily for customized potlife

Biresin® Composite resins for parts and moulds for infusion processing												
Temperature range		to 80°C						to 120°C		160°C		
Resin		Biresin® CR80				Biresin® CR81		Biresin® CR120		Biresin® CR170		
Hardener	Biresin®	CH80-1	CH80-2	CH80-6	CH80-10	CH80-1	CH81-6	CH80-10	CH120-3	CH120-6	CH170-3	
Mixing ratio	in pbw	100 : 30				100 : 30		100 : 30		100 : 16		
Mixed viscosity, 25°C	mPas	400	350	230	210	180	150	130	240	250	1.250	
Potlife, RT	min	30	60	180	300	45	260	500	90	180	90	
Colour		yellowish-translucent				yellowish-translucent		yellowish-translucent		yellowish-translucent		
Post curing conditions for mechanical values		12 h / 80°C				12 h / 80°C		12 h / 120°C		3 h / 60°C + 4 h / 160°C		
Shore hardness	ISO 868	-	D 86	D 86	D 86	D 86			D 85	D 85	D 86	
Flexural-E-Modulus	ISO 178	MPa	2,700	2,800	2,900	2,900	2,600	2,950	2,950	2,600	2,500	2,750
Flexural strength	ISO 178	MPa	117	120	126	124	116	121	118	115	120	128
Tg	ISO 11357	°C	90	82	80	80	75	82	65	113	115	172

Biresin® CR82 and CR122 – High performance Composite resins with optimized viscosity for wet lay-up processing

- Biresin® CR82 for temperature range to 80°C
- Biresin® CR122 for temperature range to 120°C
- Excellent mechanical properties
- Very good wettability
- At elevated temperatures also suitable for injection processes
- Biresin® CR122 with good demoulding properties also after room temperature curing
- In each product series the hardeners have the same mixing ratio so they can be blended easily for customized potlife

Biresin® Composite resins for parts and moulds for wet lay-up processing									
Temperature range		to 80°C				to 120°C			
Resin		Biresin® CR82				Biresin® CR122			
Hardener	Biresin®	CH80-1	CH80-2	CH80-6	CH80-10	CH122-3	CH122-5	CH122-3	CH122-5
Mixing ratio	in pbw	100 : 27							
Mixed viscosity, 25°C	mPas	740	600	400	390	370	380		
Potlife, RT	min	30	60	180	300	90	150		
Colour		yellowish-translucent				yellowish-translucent			
Post curing conditions for mechanical values		12 h / 80°C				12 h / 120°C			
Shore hardness	ISO 868	-	D 85	D 85	D 85	D 85	D 85	D 86	D 86
Flexural-E-Modulus	ISO 178	MPa	2,800	2,800	2,900	2,900	2,700	2,700	2,700
Flexural strength	ISO 178	MPa	117	120	126	124	128	125	125
Tg	ISO 11357	°C	83	79	80	78	114	119	119

Biresin® High class Epoxy gelcoats for parts or moulds

- Biresin® S5 – transparent gelcoat for composite parts
- Biresin® S12 – high abrasion resistance for moulds under high stress
- Biresin® S15 – high chemical resistance for polyester production moulds
- Biresin® S19 – very high heat resistance of more than 150°C for high-temperature moulds