

Biresin® S19 Gelcoat, high heat resistant

Areas of Application

- Gelcoat for manufacture of vacuumforming moulds
- Gelcoat for injection moulds
- Gelcoat for laminating moulds and bonding fixtures

Product Benefits

- Black gelcoat
- Good spreading properties
- Hard, good mechanical resistance
- Very good heat resistance

Description

- Basis Two component epoxy system
- Component A **Biresin® S19**, epoxy resin, black, filled
- Component B **Biresin® S19**, amine, amber, unfilled

Processing Data		Component A	Component B
Individual components		Biresin® S19	Biresin® S19
Viscosity, 23°C	mPa.s	can't be measured	~ 80
Density, 23°C	g/ml	1.75	0.92
Mixing ratio A : B	in parts by weight	100	12
		Mixture	
Mixed viscosity, 23°C	mP.as	~ 27,500	
Potlife, 500 g, RT	min	45 - 60	
Geltime, RT	min	150 - 180	
Demoulding time, RT	h	24 h RT + post curing* at 80°C	

*Postcuring: time dependent on part

Physical Data (approx. values)

Biresin® S19 (A)			with component B	Biresin® S19	
Colour				grey	
Density	ISO 1183	g/cm³		1.65	
Shore hardness	ISO 868	-		D 89*	
E-Modulus	ISO 178	MPa		6,000*	
Flexural strength	ISO 178	MPa		85*	
Impact resistance	ISO 179	kJ/m²		10*	
Heat distortion temperature	ISO 75C	°C		145*	
Glass transition temperature	DIN 53765	°C		158*	

* values after post curing: 160°C

Packaging

Working packages

Biresin® S19 A+B Pack

6 x 0.5 kg net component A +
6 x 0,06 kg net component B in a box

Processing

- The material, processing and mould temperature must be from 18 to 25°C.
- The A component must be mixed thoroughly before use.
- Then the thoroughly mixed (with spatula or slow speed mixing equipment) and without air entrapment, Biresin® S19 mixture is applied using a flat, short-haired brush or squeegee.
- The coating is available in an uniform direction to form a homogeneous, even and void-free surface coat on the mould surface which must be pretreated with suitable release agents.
- Within geltime a coupling layer or other backfilling layers can be applied to avoid adhesion problems.
- Better resistance of the surface compound to elevated temperatures, different solvents as well as exposition to water will be obtained after a post treatment of 2 h at 80°C of demoulded parts. In this case a slow heating and slow decreasing of temperature after treatment are required.

Storage

- Minimum shelf life is 12 month under room conditions (18 - 25°C), when stored in original un-opened containers.
- After prolonged storage at low temperature, crystallisation of components may occur. This is easily removed by warming up for a sufficient time to a maximum of 70°C. Allow to cool to room temperature before use.
- Containers must be closed tightly immediately after use to prevent moisture ingress. The residual material needs to be used up as soon as possible.

Health and Safety Information

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety related data.

Disposal considerations

Product Recommendations: Must be disposed of in a special waste disposal unit in accordance with the corresponding regulations.

Packaging Recommendations: Completely emptied packagings can be given for recycling. Packaging that cannot be cleaned should be disposed of as product waste.

Value Bases

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

Legal Notice

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