Tooling & Composites

Technical Data Sheet
Issued 04/2006

Biresin® S19

Gelcoat, high heat resistant

Application

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

Properties

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

Description

- Basis: Two-component-epoxy-system
- Resin: **Biresin® S19**, epoxy resin, grey, filled, medium viscous
- Hardener: **Biresin® S19**, amine, amber, unfilled, low viscous

Processing data			
Mixing ratio resin to hardener		in parts by weight	100 : 12
Mixing viscosity		mPas	thixotropic
Potlife, 200 g / RT		min	45 - 60
Geltime, RT		min	150 - 180
Demoulding time, RT		h	24

Physical Data (approx.-values)			
Colour			grau
Density	ISO 1183	g/cm³	1.75
Shore hardness	ISO 868	-	D 85*
E-Modulus	ISO 178	MPa	5,400*
Flexural strength	ISO 178	MPa	73*
Impact resistance	ISO 179	kJ/m²	7 - 10*
Heat distortion temperature	ISO 75C	°C	> 150*

* values after post curing: 1 h / 80°C + 2 h / 165°C

Delivery

Working packages	**Biresin® S19** A+B Pack	6 x 0.5 kg net resin + 6 x 0,06 kg net hardener in a box

Tooling & Composites

Processing

- The material temperature must be 18 - 25°C.
- The resin component must be mixed thoroughly before use.
- Then thoroughly (with spatula or slow speed mixing equipment) and without air entrappment, the mixed Biresin® S19 resin and hardener 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 condition (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 sufficient time to a maximum of 70°C. Allow to cool to room temperature before use.
- Containers must be closed water tight immediately after use and prevented from moisture. The residual material has to be used up as soon as possible.

Precautions

For information and advice on the safe handling and storage of products, users should refer to the current Safety Data Sheet 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.

Sika Deutschland GmbH
Stuttgarter Str. 139
D - 72574 Bad Urach
Germany

Tel.: +49 (0) 7125 940 492
Fax: +49 (0) 7125 940 401
e-Mail: tooling@de.sika.com
Internet: www.sika.de