

CUBES BLOCK GROUTING WITH SikaBiresin® PRODUCTS



Model casting resin cast close to contour or in blocks with different densities CPU-HD 1200 to 1850

Tried and tested **SikaBiresin® PU** is cast in the globally unique and patented production process of CUBES GmbH for the manufacture of shape-matched raw blocks and guarantees the highest component quality possible.

- density 1.20 - 1.85 g/cm³
- component sizes (3 x 2 x 1.5m) from 100 ltr. to max. 2,000 ltr. can be realised
- excellent price-performance ratio
- simple, low-dust processing
- high surface quality
- high abrasion resistance and impact strength
- low thermal expansion
- good compressive and edge strengths
- additional matching **SikaBiresin®** repair solutions such as adhesives and fillers

IN COOPERATION
WITH



APPLICATION AREAS

- Variable blank density from 1.20 to 1.85 g/cm³
- Near-net-shape blanks for mould and jig making as well as models, also available with thin walls
- Lower density range: front layers for sheet metal drawing tools and foundry patterns
- Medium density range: tapping patterns, gauges, vacuum forming moulds, foundry patterns, RIM tools

- Upper density range: backfill and cores for sheet metal drawing tools and foundry patterns, gauges, RIM tools, series casting of finished parts

PRODUCT ADVANTAGES

- Good machinability
- Low dust formation
- Good surface after machining
- Very fine, closed surface
- Good compressive and flexural strengths
- Dimensionally stable with high edge strength

- High abrasion resistance and impact strength
- Good sliding coefficient
- Subsequent changes are very easy to realise with additional **SikaBiresin®** block materials

DESCRIPTION

- Basis polyurethane, opaque (unfilled, density = 1.20 g/cm³) or beige (density > 1.30 g/cm³)

Mechanical properties (approx. Values)

	ISO 845	g/cm ³	CPU-HD 1200	CPU-HD 1600	CPU-HD 1700	CPU-HD 1850
Density	ISO 845	g/cm ³	1,20	1,60	1,70	1,85
Shore hardness	ISO 868	-	D 84	D 87	D 89	D 89
Modulus of elasticity	ISO 178	MPa	2.600	5.900	7.700	9.200
Flexural strength	ISO 178	MPa	105	70	65	60
Compressive strength	ISO 604	MPa	81*	88*	88*	87*
Heat resistance	ISO75B	°C	79	78	78	77
WAK _{αT}	DIN 53 752	K ⁻¹	80 x 10 ⁻⁶	55 x 10 ⁻⁶	45 x 10 ⁻⁶	40 x 10 ⁻⁶

* at 10% compression

FACTS & ADVANTAGES



Gogreen

sustainable process with minimal waste. No auxiliaries such as polystyrene moulding



Tempering

almost tension-free through subsequent heat treatment



High quality

from one piece - no plate gluing, high optical and mechanical quality



Material savings

up to 40% (to conventional methods)



Suitable for autoclaves

up to 55°C / 7bar (at density 1.70 and 1.85 g / cm³)



Fast delivery

approx. 5 days delivery time (within DE and AT)

QUALITY

Quality assurance is central for us and also for you as a customer. That is why we check the chemical, mechanical and thermal properties of each individual component. We will send you the detailed test report with the moulded part you have ordered.



Chemical properties and thermal stability. With the help of DSC measurements (Differential Scanning Calorimetry), we carefully examine every component.



We use a DMA (dynamic mechanical analysis) for **mechanical quality assurance**. By measuring the storage modulus G' , we can conclude that the mechanical product parameters are being adhered to.

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Contour inspection (3D). With a 3D hand scanner, we create an image of each molded part as a point cloud. With this comparison you will not only see the maximum deviation of our cast from the calculated model, you can even see where any deviations can be expected.