



## SikaBiresin<sup>®</sup> CIM 220

SikaBiresin<sup>®</sup> CIM 220 is a tooling material co-developed with Sika for the Massivit 10000 series. This advanced digital material provides high-speed tooling for high heat resistance applications.

### Key Advantages:

- Very high heat resistance
- Good mechanical properties after post curing
- High-dimensional accuracy with low shrinkage
- Low CTE
- Good vacuum retention
- Good workability after post curing
- Enables isotropic molds

### Applications

- Composite molds
- Thermoforming tools
- Jigs and fixtures

Character	Method	Metric	Imperial
<b>Mechanical Properties</b>			
Izod Impact	ISO 179	12 [kJ/m <sup>2</sup> ]	5.7 [ft-lb/in <sup>2</sup> ]
Shore Hardness	ISO 868	89D	89D
<b>Tensile Properties</b>			
Flexural modulus	ISO 178	8700 [MPa]	1,260,000 psi
Flexural strength	ISO 178	89 [MPa]	12,900 psi
Compressive strength	ISO 604	135 [MPa]	19,570 psi
<b>Thermal Properties</b>			
Coefficient of thermal expansion	DIN 53752	35 [ppm/°k]	19.5 [ppm/°F]
Heat Deflection Temperature *	ISO 75B	220 [°C]	428 [F]

\* Values after post curing 4 h / 120 °C

## Physical properties

Character	Tested value
Component A viscosity	75,000 mPa.S
Component B viscosity	100 mPa.S
Mix Ratio by Weight	100A:6B
Mix Viscosity	6,700 cP
Specific Gravity	1.7 g/cm <sup>3</sup>
Pot Life @RT (500gr)	60-120 min
Curing conditions	4 h / 100 °C 3 h / 140 °C
Demoulding time, RT	24/RT + 3/60°C
Mixture Color	Dark grey

All measurements were done on lab specimens of cured material, followed by post - cure process. The specifications stated above refer to the Beta aversion and results were derived from internal lab tests. The material above is under R&D development.

## Post-Curing Process

To meet the specified properties, SikaBiresin® CIM 220 should be heat-cured in a dedicated industrial oven. Consult Application Note for detailed instructions. Post - cured SikaBiresin® CIM 220 specimens can be milled, polished, or coated with a suitable coating or paint. Let coating fully dry before putting part into service.

## Storage

The material base -A and hardener -B should be stored in a dry place in the sealed original container at temperatures between +2°C and +40°C. Under these storage conditions, the shelf life is one year. The product should not be exposed to direct sunlight.

## Precautionary Statement

Massivit maintains up-to-date Material Safety Data Sheets (MSDS) on all of its products. These sheets contain pertinent information that you may need to protect your employees and customers against any known health or safety hazards associated with our products. Users should review the latest MSDS to determine possible health hazards and appropriate precautions to implement prior to using this material.