Technical data sheet

Merbenit PC200

Merbenit PC200 is a short-term high temparature resistant, fast curing, elastic sealant and adhesive with especially high and fast strength building. Based on SMP it adheres to various materials and substrates. The high temparature resistance up to 240°C allows elastic bonding of components which are exposed to short-term high temperatures in the production procedure or at the end application.

Product advantages

- After complete curing short-term resistant up to + 240°C, e.g. for powder and thermal coating
- Fast cross-linking even at low temperatures and moisture impermeable materials
- High final strength
- Simple processing
- Free of solvents, isocyanates and silicones
- Very wide adhesion range
- Odourless
- Compatible with paints
- Adjustable
- Permanently elastic from - 40°C to + 90°C
- Very good sealing properties
- Non-corrosive on surfaces
- Corrosion protecting
- Impact and vibration resistant (shock absorbing)

Technical data

Chemical base	Silane modified polymer
Mechanism of curing	1 comp. moisture curing
Shore A hardness, DIN 53505	57
Modulus elongation at 100%, DIN 53504 S2	ca. 2.3 N/mm²
Elongation at break, DIN 53504 S2	ca. 200%
Tensile strength, DIN 53504 S2	ca. 3.7 N/mm²
Consistency, DIN EN ISO 7390	stable
Tooling time	max. 8 min.
Curing rate after 24h	≥ 2.5 mm
Curing rate after 48h	≥ 3.5 mm
Density	1.50 ± 0.05 g/cm³
Volume change, DIN EN ISO 10563	≤ 4 %
Temperature resistance after curing	- 40 °C to + 90 °C
Application temperature	+ 5 °C to + 40 °C

All measurements were performed under normal conditions (23 °C and 50 % relative humidity).

The data are based on the results after 3 months.

After production of further batches, slight adjustments can occur in the product specification.

Application

Flexible bonding and sealing in the areas of metal, apparatus and machine construction, plastics technology, air-conditioning and ventilation systems, car body, wagon, vehicle and container construction. Thanks to fast cross-linking it is possible to bond parts in a continous working process. The neutral polymerisation allows a connection without thermal or chemical pre-treatment of the assembly parts. Counterbalancing tolerances. After full curing the product can be heated for a short time up to 240°C for powder coating and thermo lacquering. Due to the diversity of systems on the market we recommend preliminary tests.

Substrate range

Suitable materials are metals, powder-coated, varnished, galvanised, anodised, chromed or hot zinc dipped surfaces, various plastics, ceramics, stone, concrete and wood. Due to the large variety of different plastics and compositions as well as materials which are susceptible to cracks, preliminary tests are recommended.

Meets the standards

- Eurofins IAC Gold

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Substrate preparation
To achieve reproductible results the substrate has to be pre-treated according to the state of technology. For application the surface has to be clean, durable and free of dust, oil and grease. All undefined surfaces must be removed using suitable methods. Apply the adhesive/sealant promptly to the prepared surface. Depending on the substrate and the expected requirements a mechanical or chemical pre-treatment is recommended respectively cleaning with rubbing alcohol, isopropyl or acetone. The compatibility with adjacent materials, coatings etc. must be determined in advance.

Adhesion promoter
With most materials a good adhesion is achieved even without adhesion promoter. In the case of high moisture influence we recommend our Adhesion Promoter V40 on non-porous materials, Adhesion Promoter V21 on open porous materials. For thermo-painted or powder-coated surfaces and plastic materials we recommend our Adhesion Promoter V40. Preliminary tests are recommended.

Processing
- Can be applied directly from the cartridge / bag using a suitable caulking gun (manual, air, battery)
- Cut the nozzle tip according to the joint width
- V-nozzles are recommended for bonding applications
- Depending on the bonding surface, material expansion, tension and mechanical stresses a layer thickness of 1 - 6 mm is recommended
- For vapour permeable substrates the material can be applied in a large area using a notched trowel
- The bonding must take place within the processing time
- Can be applied with automatic dispension equipment
- Non-cured adhesive can be removed with rubbing alcohol or isopropyl
- Cured adhesive can only be removed mechanically

Paint compatibility
Due to the diversity of varnishes and paints on the market, we recommend preliminary tests. Using paints based on alkyd resins may delay the the drying process. After cleaning with acetone joints can be varnished at any time.

Chemical resistance
- Good against water, aliphatic solvents, oils, grease, diluted inorganic acids and alkalis
- Moderate against esters, ketone and aromatics
- Not resistant against concentrated acids and chlorinated hydrocarbons
- Weatherproof and resistant to aging

Colours
- telegrey RAL 7045
- other colours on request

Packaging
- Cartridges of 290 ml in boxes of 12 units
- Sausages of 600 ml in boxes of 12 units

Shelf life and storage conditions
- 15 months from date of production
- Store cool and dry (10 - 25 °C)
- Further information on request

Work and environmental safety
Important information about work and environmental safety is available on the material safety data sheet.

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