

Merbenit HM21

Merbenit HM21 is an elastic adhesive with excellent sealing properties. Thanks to SMP base universally applicable and highly durable.

Product advantages

- Compatible with paints
- Simple processing
- High elasticity, good mechanical strength
- Long processing time
- Free of solvents, isocyanates and silicones
- Odourless
- Chemical neutral polymerisation
- Non-corrosive on surfaces
- Impact and vibration resistant (shock absorbing)
- Grindable and paintable
- Very wide adhesion range
- Very good sealing properties

Technical data

Chemical base	Silane modified polymer
Consistency, DIN EN ISO 7390	Stable, ≤ 3 mm
Mechanism of curing	1 comp. moisture curing
Shore-A-hardness, DIN ISO 7619-1	45
Modulus elongation at 100%, DIN 53504 S2 *	ca. 1.6 N/mm ²
Elongation at break, DIN 53504 S2 *	ca. 350%
Tensile strength, DIN 53504 S2 *	ca. 2.5 N/mm ²
Tooling time	max. 30 min.
Curing rate after 24h	≥ 3.0 mm
Curing rate after 48h	≥ 4.0 mm
Density	1.52 ± 0.05 g/cm ³
Volume change, DIN EN ISO 10563	$\leq 5\%$
Temperature resistance after curing	- 40 °C to + 90 °C
Application temperature	+ 5 °C to + 40 °C
Elastic recovery, DIN EN ISO 7389, at elongation of 60%	$\geq 60\%$
Movement capability	25%

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

* The data are based on measurements after 3 months.

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.

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.

Technical data sheet Merbenit HM21

Substrate preparation

To achieve reproducible results the substrate has to be pre-treated according to the state of technology. 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. For application the surface has to be clean, durable and free of dust, oil and grease.

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.

Processing

- Prepare the joint according to the substrate preparation and pre-treatment description
- Observe and comply with the expiry date of all materials used
- Cut the nozzle tip according to the joint width
- Place container into suitable gun (manual, air, caulking gun)
- Apply the material bubble free into the joint
- The joint must be applied within the tooling time
- For joint smoothing we recommend using our tooling agent and if necessary joint tools
- 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
- Can be applied with automatic dispensing equipment
- 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
- 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 drying process. After cleaning with acetone joints can be varnished at any time. For burning process the material can be exposed, when fully cured, in short term to elevated temperatures.

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

Colours

- grey
- black
- white
- other colours on request

Packaging

- Cartridges of 290 ml in boxes of 12 units
- Sausages of 600 ml in boxes of 12 units
- Hobbocks of 20 liter on palet of 16 units

Shelf life and storage conditions

- 15 months from date of production in original packaging
- 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.

merz+benteli ag

Freiburgstrasse 616
CH - 3172 Niederwangen
Phone +41 31 980 48 48
Fax +41 31 980 48 49
info@merz-benteli.ch
www.merz-benteli.ch

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