

Merbenit DB50

Merbenit DB50 is an elastic adhesive for large area bonding in the range of boat and ship building. Thanks to SMP base suitable for many timber and plastics with excellent processing. Merbenit DB50 is in particular resistant to environmental influences. Meets the requirements of the International Maritime Organisation IMO.

Product advantages

- Simple processing
- Long processing time
- Good ridge
- Dimensionally stable, no flowing on inclined surfaces
- Impurities can be removed easily
- High elasticity, good mechanical strength
- Free of solvents, isocyanates and silicones
- Odourless
- Impact and vibration resistant (shock absorbing)
- Very wide adhesion range

Technical data

Chemical base	Silane modified polymer
Mechanism of curing	1 comp. moisture curing
Shore-A-hardness, DIN 53505	38
Modulus elongation at 100%, DIN 53504 S2 *	ca. 1.0 N/mm ²
Elongation at break, DIN 53504 S2 *	ca. 300%
Tensile strength, DIN 53504 S2 *	ca. 1.6 N/mm ²
Consistency	guter Riefenstand rationell spachtelbar
Tooling time	max. 60 min.
Curing rate after 24h	≥ 2.0 mm
Curing rate after 48h	≥ 3.0 mm
Density	1.62 ± 0.05 g/cm ³
Volume change, DIN EN ISO 10563	≤ 3 %
Temperature resistance after curing	- 40 °C to + 90 °C
Application temperature	+ 5 °C to + 30 °C

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

* The data are based on measurements after 3 months.

Application

Tension peaks on assembly parts are avoided by plane bonding. Flexible large surface 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. Installation of sound absorbing elements, large area bonding, bonding of honeycomb panels, sandwich panel etc. Suitable for flexible bonding of teak, larch, doussie, douglas fir, pitch pine, deck covering of plastics (except polyethylene and polypropylene), steel, aluminium and pre-fabricated deckboards. Suitable for flexible bonding of wood, precious wood, solid flooring, solid wood flooring, exotic parquet, laminate flooring, teak flooring based on PVC, aluminium and stainless steel, sheet metal, cork, linoleum flooring with textile back, bamboo flooring. Avoid contact points to non-system adhesives and sealants of other manufacturers.

Substrate range

Suitable materials are metals, powder-coated, varnished, galvanised, anodised, chromed or hot zinc dipped surfaces, various plastics and ceramics. Teak, larch, doussie, douglas fir, pitch pine, deck covering of plastic (except polyethylen and polypropylen) on boat plywood, fiberglass, aluminium and steel. Note: The substrate must be free of rust and treated against corrosion. 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

- EMICODE EC1Plus R
- Eurofins IAC Gold
- IMO FTPC Parts 2+5

Technical data sheet Merbenit DB50

Substrate preparation

The substrate must be tensile- and compression-resistant, sufficient surface solid, free of cracks, clean, flat and dry and free of release agents. Make sure the surface is protected against corrosion and avoid contact points to non-system adhesives and sealants from other manufacturers. 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. On structurally weak, porous and difficult surfaces we always recommend the use of an appropriate adhesion promoter. Preliminary tests are recommended.

Processing

- Avoid sun and rain influence on the work surface during bonding process
- Apply the adhesive with a notched trowel (toothing approx. 5 x 5 mm) evenly on the ground and insert the installation element within the working time on adhesive bed by thoroughly knocking
- To accelerate the curing or for large scale bonding of two non-breathing substrates a prior spraying with water (10 g/m²) is recommended
- Non-cured adhesive can be removed with rubbing alcohol or isopropyl
- Cured adhesive can only be removed mechanically

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

- black
- other colours on request

Packaging

Buckets of 16 kg on pallet of 33 units

Shelf life and storage conditions

- 12 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.

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