Product information | *Merbenit HM 21*

Merbenit HM 21 is an elastic, adhesive and sealant on the basis of MS-Hybrid polymer. Varied applications, 1-component, moisture curing, strong adherence and stable.
Merbenit HM 21 has similar properties to Merbenit HS 60. However, it is a little softer and more elastic in the adhesive-and sealing joint.

Product advantages:

- 1-component
- Easy processing
- Free of solvents, isocyanate and silicones
- Very wide spectrum of adherence, also without primers
- Can be applied also on moist surfaces
- Nearly odourless
- Paintable (also wet on wet)
- For powder- or thermo varnishing, stable on a short-term basis up to +200 °C
- Stable (thixotropic) up to a width of joint of 40 mm
- Corrigible
- Slit- and crack-bridging
- Grindable and varnishable
- Permanently elastic from -40 °C to +90 °C
- High mechanical firmness
- Very good sealing abilities
- Very good weather- and ageing resistance
- High resistance against water, salted water, aliphatic solvents, oils, fat, watered inorganic acids and alkalis
- Not corrosive on surfaces, no outer zone-pollution and no discolouration of natural stone
- Corrosion-Protecting
- Shock-proof and vibration-firm (shock-absorbent)

Processing:

- Merbenit HM 21 can be applied directly from the cartridge / sausage (manual or compressed air pistol) as a rounded or triangular caterpillar in stripes. If one side of the material is permeable to diffusion, Merbenit HM 21 can also be applied dimensionally with a spatula.

- **Examples for flexible adhesion applications:** Signs, strips, diagonal braces, profiles, stiffening, fixtures, fittings, plates, sheet metals, receptacles, boxes, cabins, disguises, sandwich components, containers, constructions, bottom covers, frames, panels, coverings, shields, cuffs, nosing, window sills, skirting boards, borders, parapet coatings, protective foils and fabrics.

Fields of application: Metal-, apparatus-, machine construction; electric- and plastic engineering, car bodywork, automotive-, wagon- and container manufacturing.

- **Well suitable materials are for example:** Steel, high-grade steel, aluminum, alu-anodized, brass, copper (Caution with high temperatures due to solar radiation), glass, acrylic glass, ceramics, stone, concrete, ABS (possible primers), PBT, PVC hard and soft, PPE, PA6.6-30, EPDM, GFK, wood, powder-coated, coated, galvanized, pot-galvanized surfaces. With materials which tend to stress-cracks, a preliminary investigation is recommended.

Update: 06.2008

Merbenit®
SWISS MADE

INNOVATIVE HIGH-TECH ADHESIVES AND SEALANTS

Technical datas | *Merbenit HM 21*

CHEMICAL BASE

- Permanently elastic, moisture curing, one-component adhesive and sealant based on MS hybrid polymer

TECHNICAL DATAS

Product name	**Merbenit HM 21**
Colours	white, grey, black
Processing temperature with 50 % rf	+5 °C up to +40 °C
Volume change DIN 52451	approx. 5 %
Consistency	very thixotropic, stable
Density at +23 °C	1.52 +/- 0.03 g/cm^3
Curing through after 24 hours, +23 °C, 50 % rf	approx. 3.0 mm
Skin forming time with +23 °C, 50 % rf	approx. 5 to 10 minutes
Temperature resistance after curing	-40 °C up to +90 °C, short-time up to +200 °C
Shore A hardness, DIN 53505, storage during 3 weeks at +23 °C and 50 % rf	50 +/- 3
Modulus elongation at 100 % and +23 °C, DIN 53504 S2, storage during 7 days at +23 °C and 50 % rf	approx. 0.9 – 1.0 N/mm^2
Tensile strength DIN 53504 S2, storage during 7 days at +23 °C and 50 % rf	approx. 2.0 N/mm^2
Elongation at break DIN 53504	> 400 %

CHEMICAL RESISTANCE

- Good: water, Aliphatic solvents, oils, fats, watered inorganic acids and alkalis
- Moderate: Against esters, ketone and aromatics
- Not resistant: against concentrated acids and chlorinated hydrocarbons
- Completely weather-resistant

PRIMER

- On many clean material surfaces, a good adherence is achieved, even without primers. However, a strong influence of media- and moistured load on the neutral polymerisation and the material should always be checked. In this case as well as for porous and difficult surfaces, we always recommend the use of a suitable primer.

SURFACE TREATMENT

- The surface has to be clean, strong, dust-, oil- and fat-free. Acetone or Isopropanol show good results.

STICKING-SLIT

- Optimal sticking-slits measure between 1 - 6 mm according to surface to be bonded, material extension, tension and mechanical load.

POWDER DEPOSITION AND COATING-PROCESSES

- Merbenit HM 21 can be exposed to increased temperatures on a short-time basis after the curing. Our tests at +200 °C, 10 minutes or +180 °C, 30 minutes showed no destruction of the polymer. For wet spraying tests, watery Acrylic varnishes have shown a good adhesion and varnish picture. Sufficient preliminary tests for both processes are recommended.

CLEANING

- Cleaning of not cured sealant: immediately with grain paper and Isopropanol.

Cleaning of cured sealant: mechanically.

SMOOTHING OF THE JOINT

- We recommend to use Merbenit Hybride MS tooling solvent before withdrawing.

STORAGE

- 12 months, in original packaging closed tightly, in a dry, cool place, protected from light.

PACKAGING FORMS

- 290 ml cartridge, 600 ml saugages, 20 L hobbocs, 180 L drums

DOSAGE

- A fully automatic proportioning is possible.

WORK AND ENVIRONMENTAL SECURITY

- No dangerous goods, not marking-liable. Important information about working and environmental security is available in the security data sheet.

Producer: merz + benteli ag | Freiburgstrasse 624 | CH-Niederwangen/Berne

Phone +41 (0)31 980 48 48 | Fax +41 (0)31 980 48 49 | info@merz-benteli.ch | www.merz-benteli.ch