

Silicone F

Technical Datasheet

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liquid
self-levelling

WEICON Silicone F casting and sealing compound is liquid, self-levelling, spread-able, free of solvents and has acetate-cross-linking properties. It is resistant to weathering and ageing, temperature resistant up to +180 °C (+356 °F), extremely elastic (bre

Silicone F can be specially used for elastic bonds, insulation and impregnation and even for the sealing and casting (max. 10 mm) of technical components. It adheres well to steel, aluminium, glass, ceramics, and many additional materials.

Silicone F can be used in machine and system construction, in plastic processing, the energy and electrical industry, in exhibition construction and shopfitting and in many additional industrial areas.

Technical data

Basis	1-K. Polysiloxan (Acetat)
Density	1,03 g/cm ³
Viscosity	11.000 mPa.s
Stability/Run-off (ASTM D 2202)	liquid mm
Processing temperature	+5 bis +35 °C
Cure type	by humidity
Curing condition	+5 °C to +40 °C, 30% - 95% humidity
Skin-over time	15 min.
Cure speed (first 24 h)	2-3 mm
Volume change (DIN 52451)	-9 %
Gap filling up to max.	2 mm
Shelf life (+5 °C to +25 °C)	9 months
Shore Hardness A (DIN 53505 / ASTM D 2240) ± 5	23
Elongation at break (DIN 53504 / ASTM D 412)	370 %
Tensile strength of the pure adhesive/sealant	1,8 N/mm ²
Average tensile shear strength (DIN 53283/ASTM D 1002)	0,8 N/mm ²
Tear strength (DIN 53515 / ASTM D 624)	3,6 N/mm ²
Temperature resistance	-50 bis +180 °C
Solid content	90 %
Specific forward resistance	7 x 10 14 Ohm/cm
Dielectric strength	16 kV/mm
Thermal conductivity	0,3 W/m·K
Overpaintable (liquid paint)	No
Building material category (DIN 4102)	B 2

Pretreatment of the surface

The surfaces must be clean and grease-free. Many surface contaminants, e.g. oil, dust and dirt, can be removed with WEICON Surface Cleaner. For heavily soiled metal surfaces, we recommend WEICON Cleaner Spray S; WEICON Sealant and Adhesive Remover is suitable for removing old paint or adhesive residues.

Most materials can be bonded well to themselves and among each other. For certain materials or extreme requirements, we recommend the use of an adhesion agent (primer). Detailed information on this subject is contained in the Primer selection table. A mechanical surface pretreatment, e.g. sanding or sand-blasting, can considerably improve the adhesion.

Processing

WEICON elastic one-component adhesives and sealants are supplied either in tubes or in Euro cartridges (Black-Seal also in 200 ml press pack). Euro cartridges are processed with a cartridge gun or with automatic dosing systems. WEICON Speed-Flex should be applied only with professional-quality cartridge guns (WEICON Cartridge Gun "Special").

Joining the parts to be bonded

To ensure optimum wetting, the parts must be joined before the first skin has been formed on the adhesive (skin-over time).

Curing

All elastic one-component adhesives and sealants from WEICON cure under the influence of humidity. The curing process starts at the surface and proceeds toward the inside. At 50 % relative humidity and +23 °C, the cure speed is approx. 3 mm in the first 24 hrs.

Adhesive bonds of big surfaces and high layer thicknesses cure more slowly since the humidity can not penetrate so fast to the inside if the outer layers have already cured. Higher temperatures or higher humidity accelerate the curing, while lower temperatures or low humidity slow it down.

Storage

When unopened and stored in a normal climate (+23 °C and 50 % rel. humidity), WEICON elastic one-component adhesives and sealants have a shelf life of 9 - 12 months, depending on the type.

Note

Any product specifications and recommendations given herein must not be seen as guaranteed product characteristics. They are based on our laboratory tests and on practical experience. Since individual application conditions are beyond our knowledge, control and responsibility, this information is provided without any obligation. We do warrant the continuously high quality of our products being free from defects in accordance with and subject to our General Sales Conditions. However, own adequate laboratory and practical tests to find out if the product in question meets the requested properties are recommended. A claim cannot be derived from them. The user bears the only responsibility for non-appropriate or other than specified applications.

Health and Safety

When using WEICON products, the physical, safety technical, toxicological and ecological data and regulations in our EC safety data sheets (www.weicon.com) must be observed.

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