



ADHESIVES & SEALANTS



Weicon Solar-Flex

Developed especially for the solar industry, Weicon Solar-Flex is an MS polymer based elastic adhesive with very high initial bond strength. Because of this fast development of adhesive power, Solar-Flex can be used to bond vertical surfaces. This high quality adhesive is typically used to replace conventional fastening methods when installing solar and photovoltaic systems.

Features

- Very high initial adhesive strength
- Adheres to a wide range of materials (even moist surfaces)
- Resistant to weathering and UV
- Free of silicone, isocyanate and halogen
- Solvent-free, odour-free, non-corrosive
- Can be painted over immediately (wet in wet)
- Sandable after complete curing

Applications

- Solar power systems
- Junction boxes
- Marking systems
- Metalworking
- Tank and apparatus construction
- Ventilation and air conditioning
- All areas where sealants/adhesives that contain silicone are not permitted

Properties

Basis	One Component MS Polymer
Density	1.62 g/cm ³
Viscosity	Pasty
Stability/Run-Off ASTM D 2202	<1mm
Processing Temperature	+5°C to 35°C
Curing Conditions	+5°C to 40°C and 30% to 95% Relative Humidity
Skin-Over Time	10 min.
Cure Speed (first 24 Hours)	2-3mm
Volume Change (DIN 52451)	-2%
Gap Filling up to Max.	10mm
Gap Width up to Max.	30mm
Shelf Life (+5°C to 25°C)	12 Months
Shore Hardness A (DIN 53505 / ASTM D 2240) ± 5	50
Elongation at Break (DIN 53504 / ASTM D 412)	600%
Tensile Strength of the Pure Adhesive/Sealant	1.9 N/mm ²
Average Tensile Shear Strength (DIN 53283)	1.5 N/mm ²
Tear Strength (DIN 53515 / ASTM D 624)	13 N/mm ²
Movement Capacity Max.	20%
Temperature Resistance	-40°C to +90°C (Continuous)
Overpaintable (liquid paint)	Only using "wet in wet" within 3 hours (max.) after material application.
Building Material Category (DIN 4102)	B 2
Approvals	Kenstoff Institut Ludenscheid TUV Rheinland

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Important

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Solar-Flex Chemical Resistance After Curing

2-Propanol	-	Hydrogen Peroxide (3%)	+
Acetic Acid (<5%)	+	Ketones	-
Acetone	-	Lyes (diluted)	+
Alcohol	O	Methanol	-
Ammonia (10%)	+	Methyl Ethyl Ketone	-
Antifreeze	+	Motor Oil (Mineral and Synthetic)	-
Caustic potash solution (20%)	O	+140°C	-
Citric Acid (10%)	-	Motor Oil (Mineral and Synthetic)	-
Concentrated Formic Acid	-	Naphtha	-
Concentrated Phosphoric Acid	-	Nitric Acid (5%)	-
Concentrated Silicon Oil	+	Paint Thinner	-
Cooling Lubricant (Water Dilutable)	+	Paraffin Oil	-
Diesel / Heating oil	-	Petrol (92 to 100 octane)	-
Edible Oil / Vegetable Oil	O	Phosphoric Acid (5%)	-
Ethanol	-	Salt Water / Sea Water	+
Freon	-	Sodium Hydroxide Solution (20%)	-
Gear Oil	-	Sulphuric Acid (5%)	-
Glycerine (glycol)	+	Toluene	-
Glycol Ether	-	Water	+
Hydraulic Oil	O	Water (90°C)	+
Hydrochloric Acid (5%)	-	Xylene	-

+ = Resistant

O = Resistant for a Limited Time

- = Not Resistant

Preparation of the Surface

The surface to which Solar-Flex will be applied 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 surfaces we suggest Weicon Cleaner S Spray. 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 suggest the use of an adhesion agent or primer. More information on these are available from Associated Gaskets. Alternatively, a mechanical surface pre-treatment (e.g. sanding or sand-blasting) can considerably improve adhesion.

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Processing

Solar-Flex is supplied in cartridge form and should be applied using a cartridge gun or automatic dosing system.

Joining the parts being bonded

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

Curing

All Weicon elastic one part adhesives and sealants cure by reacting with humidity in the surrounding environment. The curing process starts at the surface of the adhesive and proceeds inwards from there. At 50% relative humidity and 23°C, the cure speed is approximately 3mm in the first 24 hours.

Adhesive bonds of large surfaces and high layer thicknesses cure more slowly as the humidity cannot penetrate as quickly towards the inside of the adhesive if the outer layers have already cured. Higher temperature and/or higher humidity accelerates curing while lower temperatures and/or lower humidity slows it down.

Storage

When stored unopened and in normal climatic conditions (23°C and 50% relative humidity) Weicon Solar-Flex has a minimum shelf-life of 12 months.

Availability

Weicon Solar-Flex is available in white (RAL Colour Code 9003) or grey (RAL 7000). Both colours are supplied in 290ml cartridges.

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