

Technical Data Sheetswiftsupplies.com.au

Weicon Flex 310 Polyurethane is an extremely versatile polyurethane based one-part adhesive made in Germany. This elastic adhesive is used to create strong bonds that are permanently elastic and bonds very well to wood, metals, plastics, ceramic, glass, stone and more.

Flex 310 Polyurethane can be painted, ground or sanded. It is completely free of silicones and solvents and is neutral curing so it will not damage sensitive surfaces the way some acetate cure silicones may. It also emits very little odour while curing.

Flex 310 Polyurethane is highly resistance to UV, abrasion, salt and fresh water as well as weak or diluted acids. It can be used for sealing and bonding indoors or outdoors.

Weicon Flex 310 Polyurethane is an ISEGA recognised sealant suitable for use in food processing applications.

[View This Product](#)**Applications**

- Air conditioning, heating and ventilation construction, sealing and maintenance
- Pipeline and fitting construction and bonding
- Car body work and repairs
- Shipping container maintenance and construction
- Cool room construction and repairs
- Tank sealing
- Bonding and sealing food preparation and handling machines and equipment
- For bonding and sealing in applications where silicones are not able to be used

Preparation of the Surface

To ensure good adhesion, the surface Flex 310 Polyurethane will be applied to must be clean and free of greases or oils. Surface contaminants like dust or dirt can be removed with general cleaners (or Weicon Surface Cleaner). For heavily soiled surfaces, Weicon Cleaner S or Weicon Gasket Remover may be more suitable.

Most types of materials can be bonded to with Weicon Flex 310 Polyurethane. That said, for certain materials (such as low surface energy plastics like polyethylene or PTFE) or extreme requirements the use of a primer may be necessary. More information on these is available from Swift Supplies. Alternatively, (and for very smooth surfaces) a mechanical surface pre-treatment (e.g. sanding or sand-blasting) can considerably improve adhesion.

Important

The values listed here and the information presented should not be treated as a substitute for specific technical advice. We cannot warrant the products performance or suitability for particular applications.

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Application

Flex 310 Polyurethane should be applied using a cartridge gun or automatic dosing system. To ensure optimum wetting and therefore adhesion to the surfaces, the parts being bonded must be joined before the first skin has formed on the adhesive. 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.

Technical Details

Properties

Basis	One Part Polyurethane
Viscosity	Pasty
Density	1.17 g/cm ³
Stability / Run-Off (ASTM D 2202)	1mm
Processing Temperature	+5°C to +40°C
Curing Temperature	+5°C to +40°C 30% to 95% Relative Humidity
Skin-Over Time	45 Minutes
Cure Speed (first 24 hours)	2-3mm
Volume Change (DIN 52451)	-6%
Gap Fill Max. Depth	5mm
Gap Fill Max. Width	25mm
Shore Hardness (DIN 53504 / ASTM D 412)	45 Shore A
Elongation at Break (DIN 53504 / ASTM D412)	450%
Tensile Strength of Sealant	2 N/mm ²
Average Tensile Shear Strength (DIN 53283)	1.6 N/mm ²
Tear Strength (DIN 53515 / ASTM D 624)	9 N/mm ²
Max. Movement Capacity	10%
Temperature Resistance (Continuous)	-40°C to +90°C
Temperature Resistance (Short-Term, 2 Hour Max.)	+120°C
Paintable (Liquid Paint)	"wet in wet" or after complete cure
Building Material Category (DIN 4102)	B 2
Shelf Life (Stored at +5°C to +25°C)	9 Months

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Weicon Flex 310 Polyurethane Chemical Resistance After Curing

Acetic Acid (<5%)	-	Ketones	-
Acetone	-	Lyes (diluted)	+
Alcohol	O	Methanol	-
Ammonia (10%)	O	Methyl Ethyl Ketone	-
Antifreeze	+	Motor Oil (Mineral and Synthetic)	-
Caustic potash solution (20%)	+	+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%)	O
Gear Oil	-	Sulphuric Acid (5%)	-
Glycerine (glycol)	+	Toluene	-
Glycol Ether	-	Water	+
Hydraulic Oil	O	Water (90°C)	-
Hydrochloric Acid (5%)	-	Xylem	-
Hydrogen Peroxide (3%)	-		

+ = Resistant

O = Resistant for a Limited Time

- = Not Resistant

Storage

When stored unopened and in normal climatic conditions (23°C and 50% relative humidity) Weicon Flex 310 Polyurethane Sealant and Adhesive has a minimum shelf-life of 9 months.

Available Sizes

Weicon Flex 310 Polyurethane is available from Swift Supplies in 300ml tubes in White, Black or Grey.

White = RAL Colour Code 9003

Black = RAL Colour Code 9004

Grey = RAL Colour Code 7000

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