

**Technical Data Sheet**[swiftsupplies.com.au](http://swiftsupplies.com.au)

Weicon Flex 310 M Crystal Clear Sealant is a high quality, German manufactured type of elastic adhesive and sealant that is completely transparent after curing. Based on MS Polymers, this adhesive is completely free of silicones, solvents, halogens and isocyanate.

Flex 310 M Crystal bonds very well to most materials and surfaces including wood, ceramic, metals, glass, stone, aluminium, stainless steel and many plastics (including polycarbonate, PMMA and acrylic). It creates high strength bonds that are permanently elastic and maintain their strength while tolerating some movement in the bonded parts.

Once cured, Flex 310 M Crystal can be sanded and is resistant to salt and fresh water. It is an ISEGA recognised sealant suitable for use in food processing applications.

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

- Tank sealing, construction and repairs
- Electrical repairs
- Sealing around light fittings
- Shop fitting and displays
- Plastic processing
- Automotive, aerospace and marine interior work
- Mounting clear plastic panels
- Boat and yacht construction
- Heating, air conditioning and ventilation work
- Metal construction
- Anywhere silicone adhesives are not suitable or permitted

**Preparation of the Surface**

To ensure good adhesion, the surface Flex 310 M Crystal 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 M Crystal. 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.

**Application**

Flex 310 M Crystal 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

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Date Created: 5/11/2016

Date Modified: 20/11/2016

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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 MS Polymer<br>(1K – Polyoxypropylene)                               |
|-----------------------------------------------------|------------------------------------------------------------------------------|
| Viscosity                                           | Pasty                                                                        |
| Density                                             | 1.06 g/cm <sup>3</sup>                                                       |
| Stability / Run-Off<br>(ASTM D 2202)                | <1mm                                                                         |
| Processing Temperature                              | +5°C to +40°C                                                                |
| Curing Temperature                                  | +5°C to +40°C<br>30% to 95% Relative Humidity                                |
| Skin-Over Time                                      | 10 Minutes                                                                   |
| Cure Speed (first 24 hours)                         | 2-3mm                                                                        |
| Volume Change (DIN 52451)                           | -1%                                                                          |
| Gap Fill Max. Depth                                 | 5mm                                                                          |
| Gap Fill Max. Width                                 | 25mm                                                                         |
| Shore Hardness<br>(DIN 53504 / ASTM D 412)          | 40 Shore A                                                                   |
| Elongation at Break<br>(DIN 53504 / ASTM D412)      | 300%                                                                         |
| Tensile Strength of Sealant                         | 3 N/mm <sup>2</sup>                                                          |
| Average Tensile Shear Strength<br>(DIN 53283)       | 2 N/mm <sup>2</sup>                                                          |
| Tear Strength<br>(DIN 53515 / ASTM D 624)           | 19 N/mm <sup>2</sup>                                                         |
| Max. Movement Capacity                              | 20%                                                                          |
| Temperature Resistance<br>(Continuous)              | -40°C to +90°C                                                               |
| Temperature Resistance<br>(Short-Term, 2 Hour Max.) | +120°C                                                                       |
| Paintable (Liquid Paint)                            | Only using "wet in wet" within 3 hours<br>(max.) after material application. |
| Building Material Category<br>(DIN 4102)            | B 2                                                                          |
| Shelf Life<br>(Stored at +5°C to +25°C)             | 12 Months                                                                    |

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**Weicon Flex 310 M Crystal 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%)       | 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) | O | 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)                  | O | Toluene                           | - |
| Glycol Ether                        | - | Water                             | + |
| Hydraulic Oil                       | - | 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 M Crystal Clear Sealant and Adhesive has a minimum shelf-life of 12 months.

### Available Sizes

Weicon Flex 310 M Crystal is available from Swift Supplies in 310ml tubes.

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