

## APM Unosil 801

Description	
System:	2K silicone
Colour:	transparent
Viscosity:	low viscosity
Solid bodies:	100% / solvent-free
Viscosity (25°C):	2800 mPa*s
Temp. range:	- 60 °C to +250 °C

Specifications	
Directive 2011/65/EC:	RoHS compatible
EC No. 1907/2006:	compliant with REACH

APM Unosil 801 is a castable, two-component silicone adhesive that is addition curing at room temperature. APM Unosil 801 is typically used for the potting and bonding of metal, glass and plastics, mainly in the optics and electronics industry.

### Surface pretreatment / cleaning

The surfaces to be bonded must be dry and free from dust, oil, separating agents and other impurities. The selected type of surface treatment depends on the requirements profile (cleanliness, mechanical strength, ageing resistance). Above all, mechanical pretreatment, e.g. grinding or sand-blasting, achieves an improvement in adhesion for metals and in many cases for non-ferrous surfaces as well. It is best to clean glass surfaces using the aqueous ultrasound cleaning method at raised temperature. Clean metallic surfaces with aqueous cleaners or clean solvents. For these materials and in particular plastics, surface pretreatment using oxygen plasma has proven successful. Plasma treatment dries the surface and improves wettability. This achieves good adhesion of the adhesive.

Primers are no replacement for surface pretreatment. Adhesion and ageing resistance can also be improved by using primers.

### Properties of fluid adhesive

Colour:	transparent
Mixture viscosity (25°C):	2800 mPa*s
Mixture ratio A/B:	9 : 1 weight
Pot life at 25°C:	90 min

### Mixing the adhesive components

The two adhesive components are weighed in the clean mixing beakers in the specified mixing ratio. The components must be machine mixed (Speedmixer) or manually without admixing air bubbles. To obtain a perfect mixture, produce at least 10g of the mixture. After mixing it must then be free from streaks, clear and colourless.

### Properties of cured adhesive

Colour:	transparent
Shore A (25°C):	50
Tensile shear strength (25°C):	6 N/mm <sup>2</sup>
Elongation at break:	100 %
CTE:	3*10 <sup>-4</sup>
E-module:	7000 MPa
Thermal conductivity:	0.20 W/mK

### Adhesive curing

Curing time at + 23 °C	24 h
Curing time at + 70 °C	20 min
Curing time at + 100 °C	10 min
Curing time at + 150 °C	5 min

### Disposal

The liquid components of the adhesive must be disposed of as hazardous waste in the same way as synthetic resin or paint components. Cured adhesive is disposed of as hazardous waste in the same way as thermosetting plastics depending on local legal requirements or as domestic waste.

### Safety instructions

Avoid contact with skin and eyes. When applying the adhesive, always wear gloves and safety goggles. If adhesive comes into contact with the skin, do not use solvents to remove. Instead wash the affected area (hands) with warm water and soap and then dry. Liquid adhesive irritates on contact with the eyes and may lead to permanent eye damage. Before use, please observe the instructions in the safety data sheet.

### Storage

The adhesive has a shelf life of at least 9 months at a storage temperature of 5 °C to 30 °C.

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