

APM Unocol 760

Description	
System:	1-component adhesive
Colour:	fluorescent yellow, transparent
Viscosity:	liquid, thixotropic
Solid bodies:	100% / solvent-free
Curing:	UV/visible light
Temp. range:	- 40 °C to +120 °C

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

APM Unocol 760 is a dual-cure adhesive that can be cured by UV and/or temperature. APM Unocol 760 is used in all places where fast fixing of components using UV curing is required, but where the adhesive is also sometimes in shaded areas, which can be cured retrospectively at increased temperatures.

The fluorescent yellow colouring allows simple, visual monitoring of the adhesive dosage. With the APM Unocol 760 it is also a thixotropic system with medium to high viscosity. This ensures good dosing and yet running of the applied adhesive bead or the adhesive point is prevented. APM Unocol 760 is primarily used for the adhesion of plastics, if high gap filling capability and flexible bonding are required.

The product has outstanding adhesive properties to a variety of materials. This includes glass, many plastics and most metals.

Properties of fluid adhesive	
Viscosity (25°C):	60 – 100 Pa*s
Spec. Density (25°C):	1.1 g/cm ³

Properties of cured adhesive	
Colour:	fluorescent yellow
Shore D (25°C):	50 - 55
Tensile strength (25°C):	5 N/mm ² (PMMA)
Breaking elongation:	250 %

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). 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. With plastics, the surface is also chemically modified. With poor adhesive plastics

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

Curing the adhesive

The curing of Unocol 760 takes place via exposure to UV light of sufficient intensity. The curing speed is dependent on the intensity of the UV radiation, the spectral distribution of the light source, the exposure time and the transparency of the substrate to be bonded.

A layer of up to 1.0 mm can be cured in seconds with a 200 watt mercury vapour lamp, in spot curing, for example, with the OmniCure® S2000 device.

The temperature curing takes place (alternatively or additionally) at 120°C over 30 min or 80°C over 2 hours.

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

Storage

The adhesive has maximum shelf life at temperatures between 8 °C and 21 °C. The shelf life of the two components is at least 9 months under these conditions. When stored at under 8°C and over 28°C the product properties can be negatively influenced. The shelf life is 6 months from manufacture.

Disposal

The liquid components of the adhesive must be disposed of as hazardous waste in the same way as synthetic resin or paint components. Under no circumstances mix large quantities (> 100 g) of the components for curing since the curing process is strongly exothermic and could result in the mixture heating up to a dangerous extent. Cured adhesive is disposed of as hazardous waste in the same way as thermosetting plastics depending on local legal requirements or as domestic waste.

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