November 2025

APM Unoflex Light

Description	
APM number:	103620
System: compound	1-component adhesive / sealing
Colour:	grey
Consistency:	stable / thixotropic
Solid bodies:	100% / solvent-free
Skin formation:	5 minutes
Temp. range:	- 40 °C to +90 °C

Application / specifications
Seals due to their high compressibility
Damping vibrating elements
Device sealing and display bonding
Large-area bonds subject to low strain
Simultaneous insulation against noise, heat and cold
RoHS compatible
compliant with REACH

Unoflex Light is an extremely light-weight and highly flexible MS polymer adhesive and sealant with permanently elastic properties. The sealant is solvent-free and extremely weather-resistant. Typically Unoflex Light is used for bonding displays in devices or for sealing covers. A thin glue line of 0.2 to 0.8 mm is typical. It can be enlarged to several mm due to its stable properties. The adhesive cavity is selected depending on the size of the parts to be sealed, the application temperature range and the difference in thermal expansion stress. Unoflex Light is frequently used to seal plastic parts or glass displays in optical or electronic devices. The sealant produces excellent results for sealing a wide variety of materials, such as glass, ceramics, metals and plastics.

Properties of fluid adhesive	
Chemical base:	MS polymer
Colour:	grey
Consistency (25°C):	stable
Processing time:	max. 5 minutes
Density (25°C):	0.50 – 0.60 g/cm^3
Shrinkage:	< 3%
Processing temperature:	+5°C to +40°C

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 pretreatment is dependent on the requirements profile (cleanliness, mechanical strength, age resistance).

Applying the adhesive

Unoflex Light is a single-component, moisture-curing adhesive and is therefore very easy to process.
The ideal processing temperature is between 20°C and 28°C. Viscosity falls at high temperature. If necessary Unoflex Light can be processed between +5°C and +40°C. The skin building time is dependent on temperature and relative air humidity during the application. The adhesive can be easily applied from the cartridge using a dosing device. It can also be applied by spatula. A uniform adhesive thickness can be ensured by a specific bond geometry or by inserting spacers, e.g. glass fibres or double-sided adhesive tape.
Unoflex Light is cured in air or the parts are joined together and prevented from slipping during curing by attaching clamps or fixing devices.
Unoflex Light is paintable and can also be painted wet-on-wet.

Properties of cured adhesive	
Colour:	grey
Completely cured after 24 h:	> 2 mm at 20°C/50% air humidity
after 48 h:	> 3 mm at 20°C/50% air humidity
Thermal stability:	-40°C / +90°C
Shore A (25°C):	31
Density (25°C):	0.50 – 0.60 g/cm^3
Modulus of elasticity:	2.8 – 2.9 N/mm^2
Tensile strength:	> 1.3 N/mm^2
Elongation at rupture:	> 300 %
Thermal conductivity:	0.06 W/mK
Chem. resistance:	water, aliphatic hydrocarbons
TGA (decomposition T.):	>370°C
Tensile shear strength	
PMMA/PMMA	1.2 N/mm^2
AL/AL (anodised)	1.1 N/mm^2
FR4 /FR4:	1.2 N/mm^2
Glass/glass:	1.1 N/mm^2

Cleaning the adhesive

Residue from non-cured adhesive on the substrates and processing equipment can be removed or cleaned using a solvent such as isopropanol or acetone. Organic solvents may lead to component destruction or stress cracking in plastics. For this reason, avoid use of aggressive solvents such as acetone, ketones and esthers. Comply with the official safety regulations when handling combustible solvents.
Cured adhesive can only be removed mechanically.

Ageing resistance of adhesive bonds

The typical application temperature range of Unoflex Light is from -40°C to +90°C. Adhesive bonds are very age resistant within this temperature range. The cured adhesive demonstrates excellent temperature stability, humidity ageing resistance and solvent resistance. After curing, Unoflex Light can be exposed to high temperatures for short periods of time. In painting tests at +160°C and for 20 minutes, the polymer showed no signs of destruction.

Compliance

Unoflex Light and all its constituents comply with the requirements of the RoHS Directive and REACH regulations. Always comply with the safety data sheet when handling the adhesive.

Storage

The adhesive achieves its best shelf life at temperatures from 10°C to 23°C. Shelf life in cartridges of 30 cm^3 / 55 cm^3 is min. 6 months. Lower temperatures cause a temporary higher viscosity.

Procurement

The adhesive is available is standard cartridges of 10 cm^3, 30 cm^3 and 55 cm^3.

Disposal

The liquid 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.

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We advise you to perform your own adequate tests to determine the suitability of our products for your specific application. In all other cases our General Terms and Conditions of Business shall apply.