

:: UNIFLEX PU

bonding and sealing compound

CHARACTERISTICS

UNIFLEX-PU adhesive and sealant is an elastic one component polyurethane that is air cured. UNIFLEX-PU has powerful adhesion to most surfaces. The treated surface can be sanded and overpainted with acrylic or 2 component paints. For synthetic resin based paints we recommend to carry out a test. The material is highly resistant to water (also seawater), low concentrations of acids and alkalis and for a limited time to fuel and mineral oils. The colours white and grey may yellow when exposed to UV light.

APPLICATION

UNIFLEX-PU is used for filling and sealing seams and joints and protecting welding seams against corrosion. It provides an elastic joint to metal (bare, primed or painted), G.R.P., wood, brick and concrete. UNIFLEX-PU is not suitable for use on woods containing oil (e.g. teak).

PRODUCT DATA

Chemical basis: 1-C polyurethane

Color: white, grey, black

Cure mechanism: Moisture curing

Specific weight: 1.26 +/- 0.02 g/cm³

Skin formation at 23°C and 50% r.h.: approx. 60 min.

Tack free time at 23°C and 50% r.h.: approx. 25-30 min.

Temperature resistance: -40°C / +80°C

Thermal resistance: 90°C

Short term: 1 day: 120°C

Short term: 1 hour: 140°C

Curing at 23°C and 50% r.h.: approx. 5mm/24h

Hardness Shore A (DIN 53505): approx. 55-60

Tensile strength (DIN 53504): 2.0 +/- 0,1 N/mm²

Elongation at break (DIN 53504): ≥ 300%

Application temperature: +5°C to +35°C

The optimum temperature for substrate and sealant is between 15°C and 25°C.

Chemical Resistance:

Resistant against: water, seawater, limewater, sewage effluent, diluted acids and caustic solutions.

Temporarily resistant to: fuels, mineral oils, vegetable and animal fats and oils.

Not resistant to: organic acids, alcohol, concentrated mineral acids and caustic solutions or solvents.

HANDLING

Surface preparation:

The surface must be dry, clean, oil and grease free. The surface temperature should be between 10 and 25°C. Carry out a test to establish its compatibility and adhesion to plastics and paints. Pierce the membrane in the top of the cartridge and screw on the nozzle.

Cut the plastic nozzle so as to provide the required diameter and formate for the extrusion or bead. Close the cartridge hermetically, the shelf life is very limited.

The UNIFLEX-PU bead can be shaped or spread after a short hardening time without tearing. Use a finger, but wear a wetted glove or use a wetted applicator when filling joints.

Bonding:

Apply the material with a spreader or directly from the cartridge to the surface. The application amount depends on the nature



06/2017

of the materials to be bonded. Insert the counter part within 10 minutes and press the parts together. Due to the consistency of UNIFLEX-PU it is recommended to fix the repair until it is cured.

Overpainting:

Uniflex PU can be over-painted with most conventional paint systems. The paint must be tested for compatibility by carrying out preliminary trials and the best results are obtained if the sealant is allowed to cure fully first, especially in the case of baked enamels. Please note that nonflexible paint systems may impair the elasticity of the adhesive, impair joint movement and lead to cracking of the paint film. Suitable are PVC based paints and paints that dry by oxidation. Oil or alkyd resin based are generally not suitable for application over Uniflex PU.

Uniflex PU cures by reaction with atmospheric moisture. At low temperatures the water content of the air is generally lower and the curing reaction proceeds somewhat slower.

Generally the Uniflex PU must be in theory completely dry before it can be recoated. In practice it is sufficient when a chemical skin has been formed on the surface of the Uniflex PU before it can be recoated. Generally this means at least 1 hour waiting time before you can recoat again. Preliminary tests are absolutely essential.



PRECAUTIONS

Uniflex PU can be stored for 12 months in its original packing at 5° - 25°C in a cool dry place.

The storage temperature should not exceed 25°C for extended periods of time.

Keep away from heat sources.



06/2017

SAFETY ISSUES

The before mentioned technical data and information, especially the recommendations for applying and using our products, are based on our current knowledge and experience when applied under normal conditions. In practice, the materials, surfaces or site conditions are so different that no warranty regarding the working results or liability, arising out of any relationship, can be inferred neither from this information nor from a verbal consultation, except we are charged with intent or gross negligence. In this case the user is obliged to prove that he has informed us about all points required for a proper and promising judgement in writing, in time and completely. Patent rights of any third party are to be observed. Furthermore, our general sales and delivery Terms and Conditions and the latest Technical Data Sheet, which should be demanded, apply.

Directions for handling and waste disposal are in our Material Safety Data Sheet and the specifications of the Employers Liability Insurance Association for the chemical industry.

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