

# Urethane 45

## Introduction

WEICON Urethanes are 2-component polyurethanes that cure at room temperature to tough rubber-like materials, remaining flexible at temperatures down to even -60°C.

WEICON Urethanes adhere to a variety of materials such as metals, concrete, rubber, wood, fibreglass and many others. They are also suitable as flexible coatings in connection with WEICON Plastic Metal (epoxy) systems.

Due to their low sensitivity to humidity they can also be used for coatings in thin layers and have a remarkably high tensile and tear strength.



Liquid Polyurethane. Temperature resistant from -60°C up to +90°C. Flexible Casting and Coating Resin with high impact strength and abrasion resistance. For making Vibration dampers, Assembling jigs, Flexible seals, Rubber-like preotypes, etc.

## Technical data

Composition	Polyurethane
Mixing ratio (weight %) Resin/Hardener	100:140
Pot life at +20°C	25 Min.
Density of the mixture	1,03 g/cm <sup>3</sup>
Viscosity at + 25°C (Resin/Hardener)	6.700 / 430 mPa·s
Viscosity of the mixture at + 25°C	1.000 mPa·s
Cure time mechanical loads (50% strength) at (20°C):	12 hours
Cure time final strength (100% strength) at (20°C):	24 hours
Tensile strength acc. to ISO 37	4,1 MPa
Elongation at break acc. to ISO 37	2.400 %
Resistance to further tearing	9,5 kN/m
Shore hardness A	45
Colour after curing	beige
Temperature resistance	- 60 to + 90 °C

## Pretreatment of the surface

The surfaces must be clean, dry and degreased (metallic clean). Almost every surface soiling like e.g. old paint residues, oil, grease, dust and dirt can be removed with WEICON Surface Cleaner or WEICON Sealant and Adhesive Remover.

If the surfaces are badly soiled resp. smooth the adhesion can be optimized by sand-blasting with sand in a suitable grain size or by mechanical roughening with coarse abrasive material. Cast parts, which have been exposed to sea water for a long time, should be treated with special care as they might contain inorganic salts. It is possible that these salts reach the surface and absorb moisture, thus starting rust formation (rust bubbles under the protective coating). We therefore recommend to heat or flame the parts after sand-blasting.

If adhesion with the ground is not desired, a separating agent must be applied. For smooth surfaces, WEICON Mould Release Agent F 1000 liquid (free of silicone). For porous surfaces, WEICON Mould Release Agent Wax P 500.

We recommend to start the application of WEICON Urethane straight after the surface pre-treatment to avoid oxidation and instantaneous rust formation.

## Processing

### Mixing

Mix resin and hardener for at least 4 minutes with the processing spatula or mechanical mixers at a low speed (max. 500 r/min.) to get a uniform mass. Do not mix more material than you are able to use within the pot life.

### Pot life and processing time

The indicated pot life times refer to mixtures of 200 g and +20°C material temperature. WEICON Urethane should be processed at room temperature (approx. +20°C).

At temperatures below +16°C, the pot life and cure time will slow down; below approx. +5°C no reaction between resin and hardener will take place any more.

### Cure and treatment

WEICON Urethane can be machined or demoulded after 12 hours at room temperature. To achieve the full technical characteristics, it is possible - after 24 hours at room temperature - to temper-harden for 6 hours at +60°C. Final cure of all three types is reached after 48 hours (at room temperature).

In low temperature environments, the cure time can be speeded up by the influence of heat, max. +40°C (heat lamp, electric blanket, hot air fan). To avoid thermal overheating and a possible deformation, the surface must not be warmed up with open flame (e.g. gas burner, oil lamp).

## Storage

Store WEICON Urethane at room temperature (+20°C) in a dry place. Unopened containers can be stored for at least 6 months after delivery at temperatures from +18°C to +25°C. Opened containers must be used within 3 months.

## Note

Any product specifications and recommendations given herein must not be seen as guaranteed product characteristics. They are based on our laboratory tests and on practical experience. Since individual application conditions are beyond our knowledge, control and responsibility, this information is provided without any obligation. We do warrant the continuously high quality of our products being free from defects in accordance with and subject to our General Sales Conditions. However, own adequate laboratory and practical tests to find out if the product in question meets the requested properties are recommended. A claim cannot be derived from them. The user bears the only responsibility for non-appropriate or other than specified applications.

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