

Urethane 85 SF



high wear resistance | fast-curing | pasty | shore hardness: A85

WEICON Urethane 85 SF is a special, pasty polyurethane for coating and repairing rubber surfaces. For example, conveyor belts in industrial plants, in open-cast mining or in mines can be repaired with the polyurethane. Urethane 85 SF has very high wear resistance.

It is free of solvents and is processed at room temperature. Before application, the surface to be treated must be roughened considerably and then wetted with a special 2-component primer (rubber primer), otherwise no adhesion to the surface will be generated. The pot life is two to three minutes. No additional heating is necessary for curing. Surfaces coated with Urethane 85 SF are capable of bearing loads after one hour. Full curing is completed after three hours. A special primer is available for coating of metal surfaces.

Characteristics

Base	polyurea
Texture	pasty
Colour	black
Minimum shelf life	at room temperature 12 mon.

Processing

Processing temperature	+15°C to +40°C
Component temperature	>3°C above dew point
Relative air humidity	<70 %
Mixing ratio by weight	1:10
Viscosity resin	at +25 °C 600 mPa·s
Viscosity hardener	at +25 °C 13.000 mPa·s
Viscosity of the mixture	at +25 °C 4.500 mPa·s
Density of the mixture	1,1 g/cm ³
Consumption	Layer thickness 1.0 mm 1,1 kg/m ²

Curing

Pot life	at 20 °C	3 min.
Working strength after	20 °C	1 h
Final strength	(100 % strength)	3 h

Mechanical properties after curing

Tensile strength	DIN EN ISO 527-2	8,4 N/mm ²
Elongation at break (tensile)	DIN EN ISO 527-2	590 %
Tear resistance		31 kN/m
Hardness (Shore A)	DIN ISO 7619	ca. 85±3

Thermal parameters

Temperature resistance wet	-60 °C - +80 °C (-76 - +176 °F)
Temperature resistance dry	-60 °C - +100 °C (-76 - +212 °F)

Instructions for use

When using WEICON products, the physical, safety-related, toxicological and ecological data and regulations in our EC safety data sheets (www.weicon.com) must be observed.

Surface Pre-Treatment

The successful application of WEICON Urethane depends on the thorough pre-treatment of all surfaces. This is the most important factor for ensuring overall success.

Dust, dirt, oil, grease, rust and moisture or wetness have a negative impact on adhesive strength. Therefore, before processing WEICON Urethane, the following points must be observed:

the areas to be bonded or repaired must be free of any oil, grease, dirt, rust, oxides, paint and other impurities or residues. For cleaning and degreasing, we recommend WEICON Cleaner Spray S. Before application, the cleaner must flash off/evaporate without leaving any residue. Otherwise the urethane will not cure fully.

Do not use alcohol-based cleaners on absorbent surfaces.

Smooth and particularly heavily soiled surfaces should additionally be treated by mechanical surface pre-treatment, e.g. by grinding or preferably by blasting. In case of blasting, the surface should be brought to a degree of purity of SA 2 ½ - "Near White Blast Cleaning" (according to ISO 8501/1-2, NACE, SSPC, SIS). In order to achieve an optimum surface roughness of 75-100 µm, angular disposable blasting media (aluminium oxide, corundum) should be used. Reusable abrasive media (slag, glass, quartz) but also ice blasting will have a negative effect on the surface quality. The air for blasting must be dry and oil-free.

Metal parts that have come into contact with sea water or other salt solutions should first be rinsed thoroughly with demineralised water and, if possible, left to rest overnight so that all salts can be dissolved from the metal. Before each application of WEICON Urethane, a test for soluble salts

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should be carried out according to the Bresle method (DIN EN ISO 8502-6). The maximum amount of soluble salts remaining on the substrate should not exceed 40 mg/m². Heating and repeated blasting of the surface may be necessary to remove all soluble salts and moisture.

After each mechanical pre-treatment, the surface should be cleaned again with WEICON Cleaner Spray S and protected from further contamination until the coating is applied.

Areas where no adhesion to the substrate is desired must be treated with silicone-free mould release agents. For smooth surfaces, we recommend WEICON Mould Release Agent Liquid F 1000 or, for porous surfaces, WEICON Mould Release Agent Wax P 500.

After the surface pre-treatment, WEICON Urethane should be applied as soon as possible (within one hour) to avoid oxidation, flash rust or new contamination.

Mixing

Thanks to the modern mixing and dosing system, WEICON Urethane 85 SF can be automatically dispensed, mixed and applied cleanly and precisely in just one step. In this way, a uniform quality and process assurance are guaranteed in a production series. Insert the double cartridge for processing into the dispenser provided with the 10:1 slider. Remove the cap and squeeze out a small amount of urethane until both components emerge evenly. Attach mixing nozzle and apply evenly to the surface within the pot life of 3 minutes.

Application

During application, we recommend an ambient temperature of no more than 25°C and less than 70% relative air humidity. An application to reach the desired layer thickness should be carried out in several steps.

Curing

Final hardness is reached after 3 hours at 20°C (68°F) at the latest. Higher temperatures shorten the curing time. The following rule of thumb applies: each increase by +10°C (50°F) above room temperature (20°C/68°F) will decrease the curing time by half. Temperatures below 16°C (61°F) increase the curing time, until at approx. 5°C (41°F) and below, almost no reaction will take place at all.

Storage

WEICON Urethane should be stored at room temperature in a dry place. Unopened containers can be stored at temperatures of +18°C to +25°C and a relative humidity <70%. Opened containers must be used up within 3 months.

Scope of delivery

Adhesive | Mixing Nozzle MFHX

Accessories

10000147	Cleaner Spray S, 500 ml, transparent
10000347	Cleaner S, 5 L, colourless, transparent
10024313	Surface Cleaner, 400 ml, transparent
10025288	Surface Cleaner, 5 L, transparent
10026647	Mould Release Agent Liquid F 1000, 250 ml, white, milky
10026712	Mould Release Agent Wax P 500, 150 g
10010887	Processing Spatula, 1 PCE
10022562	Processing Spatula, 1 PCE
10057514	Dispenser 2C 10:1 Standard, 1 PCE
10057191	Mixing Nozzle MFHX, 1 PCE, orange
10010066	Contour Spatula Flexy, 1 PCE
10065455	Brush 35, long, Adhesive, 1 PCE

Recommended equipment

Angle grinder	Fabric tape
Blast machine	Brush
Heat pocket	Lint-free cloth
Hot or fan heater	

Conversion table

(°C x 1.8) + 32 = °F	Nm x 8.851 = lb·in
mm/25.4 = inch	Nm x 0.738 = lb·ft
µm/25.4 = mil	Nm x 141.62 = oz·in
N x 0.225 = lb	mPa·s = cP
N/mm ² x 145 = psi	N/cm x 0.571 = lb/in
MPa x 145 = psi	kV/mm x 25.4 = V/mil

Available sizes

10062978	Urethane 85 SF, 0,54 kg, black
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