

# Repair Stick Titanium



**Wear-resistant | titanium-filled | resistant to high temperatures up to +280 °C (briefly up to +300 °C)**

It is suited for the permanent and wear-resistant repair and bonding of metal parts such as tanks and pipelines, aluminium, light metal and injection moulded parts, shafts and slide bearings, pumps and housings and torn-out threads.

The WEICON Repair Stick Titanium can be used in machine and system construction, tank construction and apparatus engineering, and in many other industrial areas.

## Characteristics

Base	epoxy
Filler	titanium
Texture	modelling compound
Colour	brown
Minimum shelf life	at room temperature 24 mon.

## Processing

Processing temperature	+15 °C (59 °F) to +40 °C (104 °F)
Component temperature	>3 °C above dew point
Cure temperature	+6 °C to +65 °C (+43 °F to +149 °F)
Relative air humidity	< 85 %
Mixing ratio by weight	1:1
Density of the mixture	1,9 g/cm <sup>3</sup>
Gap bridging up to max.	15 mm

## Curing

Pot life	at 20 °C, 10 g batch	90 min.
Working strength after	(80 % strength)	8 h
Final strength	(100 % strength)	72小时 : 室温 24小时 : +65 °C
Shrinkage		<1,0 %

## Mechanical properties after curing

Compressive strength	DIN EN ISO 604	55 MPa
Hardness (Shore D)	DIN ISO 7619	80±3

## Thermal parameters

Temperature resistance	-50 °C to +280 °C, briefly up to +300 °C
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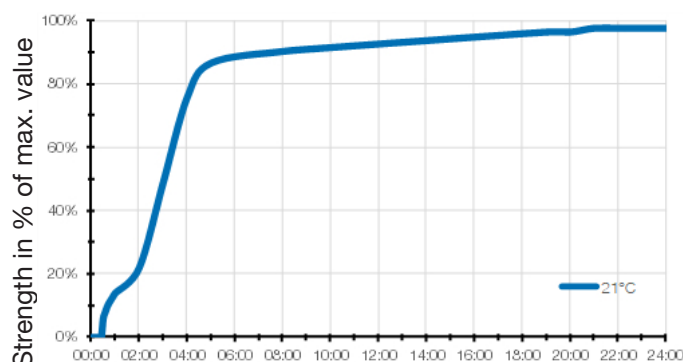
## Electrical parameters

Resistance	DIN EN 62631-3-1	~ 3·10 <sup>10</sup> Ω·m
Dielectric strength	ASTM D149	11,8 kV/mm
Magnetic		no

## Approvals / Guidelines

ISSA Code	75.530.06/07
IMPA Code	812977/78

## Increase in strength



Time in hours

## 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](http://www.weicon.com)) must be observed.

## Surface Pre-Treatment

The successful application of WEICON Repair Sticks depends on the careful preparation of the surfaces. Dust, dirt, oil, grease, residues, rust, moisture or dampness have a negative impact on adhesion. Best results are achieved with application on clean, solid and thoroughly roughened surfaces.

Surfaces must be clean, dry and free of grease. Almost all surface contaminants, such as old paint residues, oil, grease, dust and dirt, can be removed with WEICON Surface Cleaner or WEICON Sealant and Adhesive Remover. On surfaces that are extremely dirty or smooth, the adhesion can be improved by mechanical roughening with coarse abrasives.

After mechanical pre-treatment, the surface should be cleaned again with WEICON Surface Cleaner.

## Application

We recommend an ambient temperature of 20°C (68°F) with less than 85% relative humidity for processing. Only prepare

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a batch as large as can be processed within the pot life. The pot life and curing time indicated refer to a material batch of 10 g at room temperature. With larger batch sizes or higher processing temperatures, the curing process is faster due to the typical reaction heat of epoxy resins (exothermic reaction).

Twist off or cut off the required amount from the Repair Stick. The components should be mixed together until a homogeneous mixture and colour is achieved. If necessary, the putty can be warmed to room temperature to facilitate mixing.

Work the thoroughly kneaded Repair Stick into the cracks and holes to be filled, and wipe off any excess material before it hardens. To achieve a smooth surface, the material can be smoothed with water or a damp cloth before it hardens. The curing process can be accelerated by heating the Repair Stick or by applying it to a warm surface. After approx. 8 hours at room temperature, the repaired area is mechanically stable and can be threaded, drilled or sanded.

WEICON Repair Sticks can bridge a gap of up to 15 mm per application.



### Curing

The specified final hardness refers to curing at 20°C (68°F). At lower temperatures, the curing process can be accelerated by evenly applying heat up to max. 40°C (104°F), e.g. with

heat pockets, hot air or fan heaters. Higher temperatures also reduce the pot life and 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 pot life and curing time by half. Temperatures below +16°C (61°F) increase the pot life and curing time, until at approx. +5°C (41°F) and below, almost no reaction will take place at all.

### Storage

Store in unopened original container at constant room temperature in a dry place. Avoid sources of heat and both direct and indirect sunlight. Once opened, the shelf life is reduced.

### Scope of delivery

Adhesive

### Accessories

- 10024313 Surface Cleaner, 400 ml, transparent
- 10026705 Sealant and Adhesive Remover, 400 ml, pink

### Conversion table

$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$	$\text{Nm} \times 8.851 = \text{lb}\cdot\text{in}$
$\text{mm}/25.4 = \text{inch}$	$\text{Nm} \times 0.738 = \text{lb}\cdot\text{ft}$
$\mu\text{m}/25.4 = \text{mil}$	$\text{Nm} \times 141.62 = \text{oz}\cdot\text{in}$
$\text{N} \times 0.225 = \text{lb}$	$\text{mPa}\cdot\text{s} = \text{cP}$
$\text{N}/\text{mm}^2 \times 145 = \text{psi}$	$\text{N}/\text{cm} \times 0.571 = \text{lb}/\text{in}$
$\text{MPa} \times 145 = \text{psi}$	$\text{kV}/\text{mm} \times 25.4 = \text{V}/\text{mil}$

### Available sizes

- 10011970 Repair Stick Titanium, 115 g, brown
- 10011973 Repair Stick Titanium, 57 g, brown

To the product detail page:



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## Chemical resistance after curing\* (Excerpt)

1,4-Dioxane	-	Glycol	+
Exhaust fumes	+	Uric acid	-
Adipic acid	-	Impregnating oils	+
aliphatic hydrocarbons	+	Iodides (K, Na etc.)	-
Formic acid >10 % (methanoic acid)	-	Potassium carbonate	+
Ammonia anhydrous 25%	-	Potassium hydroxide 0-20 % (caustic potash)	+
Aniline	-	Milk of lime	+
aromatic hydrocarbons	+	Cresol	-
Barium hydroxide	+	Magnesium hydroxide	+
Benzoic acid	-	Maleic acid (cis-ethylenedicarboxylic acid)	-
Benzyl alcohol	-	Methanol (methyl alcohol ) <85 %	o
Benzyl chloride	-	Methylene chloride	-
Boric acid	-	Mineral oil	+
Bromides	-	Naphthalene	+
Butadiene (1,3-)	-	Sodium bicarbonate (sodium hydrogen carbonate)	+
Butyric acid	-	Sodium carbonate (soda)	+
Butyl acetate	o	Sodium chloride (table salt)	+
Butyl alcohol	o	Nitrates	-
Calcium hydroxide (slaked lime)	+	Nitrobenzene	-
Chloroanilines	-	Oils, vegetable and animal	+
Chloroform (trichlormethane)	-	Oxalic acid <25 % (ethanedioic acid)	o
Chlorosulphuric acid (wet and dry)	-	Perchloroethylene	-
Chlorosilanes	-	Kerosene	+
Chlorinated water (swimming pool concentration)	-	Phenol	-
Chromates (K, Na, etc.)	-	Phosphoric acid <50%	+
Chromic acid	-	Phthalic acid, phthalic anhydride	-
Cyanides (K, Na etc.)	-	Nitric acid <5%	-
Cyclohexanone	-	Sulphur dioxide (wet and dry)	-
Diethyl ether	+	Carbon disulphide	-
Mineral oil and mineral oil products	+	Sulphuric acid <5%	+
Acetic acid diluted <5%	o	Soap solution	+
Ethanol <85 % (ethyl alcohol)	o	Turpentine	+
Greases, oils and waxes	+	Carbon tetrachloride (tetrachloromethane)	-
Hydrofluoric acid	-	Tetralin (tetrahydronaphthalene)	-
Tannic acid diluted <7%	o	Trichloroethylene	-
Glycerin (trihydroxipropane)	+	Hydrogen peroxide <30 % (hydrogen superoxide)	o

+ = resistant 0 = for a limited time - = not resistant \*The storage of all WEICON Plastic Metal types was carried out at +20°C chemical temperature.

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