

Repair Stick Copper



very fast-curing | copper-filled | drinking water approval

WEICON Repair Stick Copper is suitable for very quick repairs and mending of cracks and leaks. The epoxy resin system has a very short processing time of only three minutes and can also be used on damp and wet surfaces. Pipes and pipe bends, fittings and flanges, copper gutters and sheets, water heaters, water tanks, hot and cold water pipes and freezer and air conditioning systems can be repaired quickly and easily with the stick. The WEICON Repair Stick Copper can be used in tank construction and apparatus engineering, in the food, cosmetics and pharmaceutical industries and in many other applications.

Characteristics

Base	epoxy
Filler	copper
Texture	modelling compound
Colour after curing	copper
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 +40 °C (+42 °F to +104 °F)
Relative air humidity	< 85 %
Mixing ratio by weight	1:1
Density of the mixture	1,9 g/cm ³
Gap bridging up to max.	15 mm

Curing

Pot life	at 20 °C, 10 g batch	4-5 min.
Handling strength	(35 % strength)	10 min.
Working strength after	(80 % strength)	60 min.
Final strength	(100 % strength)	24 h
Shrinkage		<1,0 %

Mechanical properties after curing

Compressive strength	DIN EN ISO 604	55 MPa
Hardness (Shore D)	DIN ISO 7619	82±3
Adhesive strength	DIN EN ISO 4624	7 MPa

Thermal parameters

Temperature resistance	-50 °C (-58 °F) to +120 °C (248 °F) briefly up to +150 °C (302 °F)	
Thermal conductivity	DIN EN ISO 22007-4	0,7 W/m·K

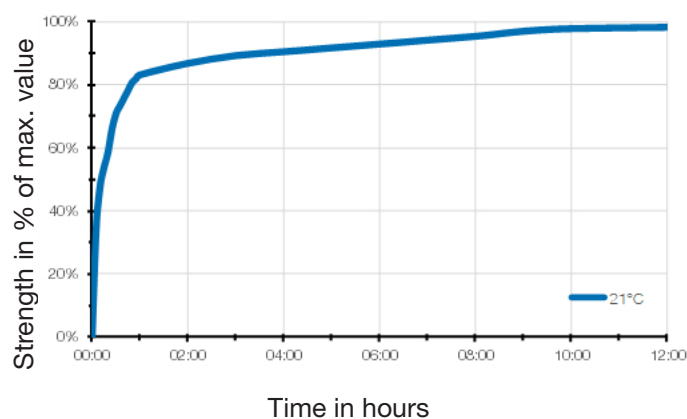
Electrical parameters

Resistance	DIN EN 62631-3-1	~ 5·10 ¹¹ Ω·m
Electrical resistance	ASTM D 257	5 Ω·cm
Dielectric strength		3,0 kV/mm
Magnetic		no

Approvals / Guidelines

NSF	NSF/ANSI Standard 61
ISSA Code	75.530.04/05
IMPA Code	812975/76

Increase in strength



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 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.

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The surfaces must be clean, dry and free of grease (metallically clean). 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.

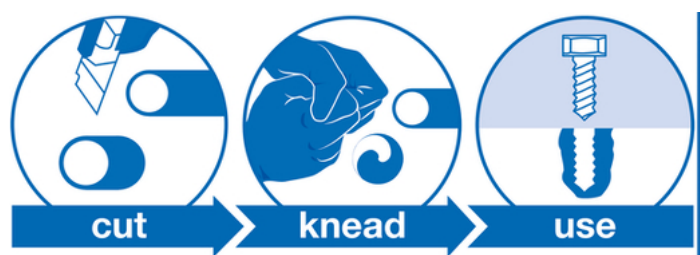
Application

We recommend an ambient temperature of 20°C (68°F) with less than 85% relative humidity for processing. Only prepare 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. 60 minutes 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 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

- 10006609 Repair Stick Copper, 115 g
- 10010227 Repair Stick Copper, 57 g

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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