

Repair Stick Stainless Steel



non-corrosive | fast-curing | stainless steel-filled | drinking water approval

For the non-corrosive repair and reconditioning of stainless steel and other rustproof metals, such as used in tanks and containers, filling and packing machines, pipes, pipelines, pumps and housings. Due to the quick mechanical loading capacity of the mended parts (approx. 60 minutes), expensive and longer downtimes are avoided.

The WEICON Repair Stick Stainless Steel can be used in tank construction and apparatus engineering, in the foods, cosmetic and pharmaceutical industries and in many other areas. Due to its special formula and the resulting NSF registration, the Repair Stick can contribute towards improvements in occupational safety and health protection.

Mechanical properties after curing

Compressive strength	DIN EN ISO 604	55 MPa
Hardness (Shore D)	DIN ISO 7619	80±3
Adhesive strength	DIN EN ISO 4624	8 MPa

Thermal parameters

Temperature resistance	from -50 °C (-58 °F) to +120 °C (248 °F), briefly up to +150 °C (302 °F)
Thermal conductivity	DIN EN ISO 22007-4 0,6 W/m·K

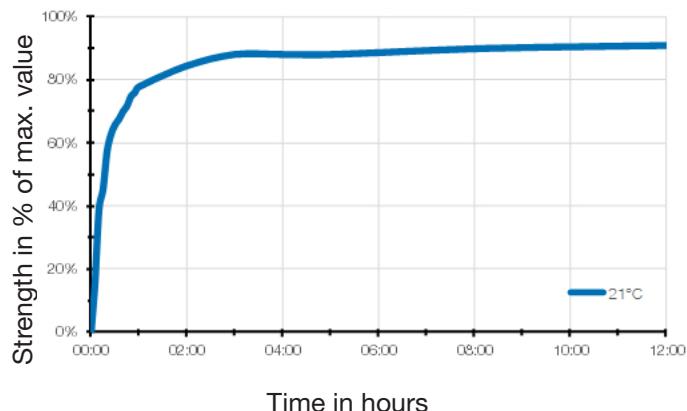
Electrical parameters

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		yes

Approvals / Guidelines

NSF	NSF/ANSI Standard 61
ISSA Code	75.530.17/18
IMPA Code	812969/70
MIL-Spec	complies with MIL-A-47284A

Increase in strength



Characteristics

Base	epoxy
Filler	steel
Texture	modelling compound
Colour	dark grey
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	2,2 g/cm ³
Gap bridging up to max.	15 mm

Curing

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

Note

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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 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

(°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/mm² x 145 = psi	N/cm x 0.571 = lb/in
MPa x 145 = psi	kV/mm x 25.4 = V/mil

Available sizes

10025658 Repair Stick Stainless Steel, 57 g, dark grey
10025663 Repair Stick Stainless Steel, 115 g, dark grey

To the product detail page:



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Chemical resistance after curing* (Excerpt)

Exhaust fumes	+	Potassium carbonate	+
Acetone	o	Potassium hydroxide 0-20 % (caustic potash)	+
Ethyl ether	+	Milk of lime	+
Ethyl alcohol	o	Carbolic acid	-
Ethylbenzene	-	Creosote oil	-
Alkalies (alkaline substances)	+	Cresylic acid	-
Hydrocarbons, aliphatic (petroleum derivatives)	+	Magnesium hydroxide	+
Formic acid >10 % (methanoic acid)	-	Maleic acid (cis-ethylenedicarboxylic acid)	+
Ammonia anhydrous 25%	+	Methanol (methyl alcohol) <85 %	-
Amyl acetate	+	Mineral oil	+
Amyl alcohol	+	Naphthalene	-
Hydrocarbons, aromatic (benzene, toluene, xylene)	+	Naphthene	-
Barium hydroxide	+	Sodium carbonate (soda)	+
Petrol (92-100 octane)	+	Sodium bicarbonate (sodium hydrogen carbonate)	+
Hydrobromic acid <10 %	+	Sodium chloride (table salt)	+
Butyl acetate	+	Sodium hydroxide >20 % (caustic soda)	o
Butyl alcohol	+	Caustic soda	+
Calcium hydroxide (slaked lime)	+	Heating oil, diesel	+
Chloroacetic acid	-	Oxalic acid <25 % (ethanedioic acid)	+
Chloroform (trichlormethane)	o	Perchloroethylene	o
Chlorosulphuric acid (wet and dry)	-	Kerosene	+
Chlorinated water (swimming pool concentration)	+	Oils, vegetable and animal	+
Hydrochloric acid	+	Phosphoric acid <5%	+
Chromium bath	+	Phthalic acid, phthalic anhydride	+
Chromic acid	+	Crude oil	+
Diesel fuels	+	Nitric acid <5%	o
Mineral oil and mineral oil products	+	Hydrochloric acid <10 %	+
Acetic acid diluted <5%	+	Sulphur dioxide (wet and dry)	+
Ethanol <85 % (ethyl alcohol)	+	Carbon disulphide	+
Greases, oils and waxes	+	Sulphuric acid <5%	o
Hydrofluoric acid diluted	o	White spirit	+
Tannic acid diluted <7%	+	Carbon tetrachloride (tetrachloromethane)	+
Glycerin (trihydroxipropane)	+	Tetralin (tetrahydronaphthalene)	o
Glycol	o	Toluene	-
Humic acid	+	Trichloroethylene	o
Impregnating oils	+	Hydrogen peroxide <30 % (hydrogen superoxide)	+
Potash	+	Xylene	-

+ = 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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