Repair Stick Titanium

Wear-resistant | titanium-filled | high-temperature-resistant up to +280 °C (+536 °F) (briefly up to +300 °C/+572 °F)

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
Processing		
Processing temperature		+15°C to +40°C
Cure temperature		+6 °C to +65 °C
Relative air humidity		< 85 %
Mixing ratio by weight		1:1
Density of the mixture		1,9 g/cm³
Gap bridging up to max.		15 mm
Curing		
Pot life	at 20 °C, 10 g batch	30 min.
Handling strength		60 min.
Working strength after	(80 % strength)	4 h
Final strength	(100 % strength)	48 h
Shrinkage		<1,0 %
Mechanical properties after curing		
Compressive strength	DIN EN ISO 604	80 MPa
Hardness (Shore D)	DIN ISO 7619	80±3
Adhesive strength	DIN EN ISO 4624	7 MPa
Thermal parameters		
Temperature resistance		to +280 °C, briefly up to +300 °C

Electrical parameters		
Resistance	DIN EN 62631-3-1	ca. $5 \cdot 10^{11}$ Ω·m
Electrical resistance	ASTM D 257	5 Ω·cm
Dielectric strength		3,0 kV/mm
Magnetic		no
Approvals / Guidelines		
ISSA Code		75.530.06/07
IMPA Code		812977/78

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

For a flawless adhesive bond, surfaces must be clean and dry (e.g. clean and degrease with WEICON Surface Cleaner).

Processing

WEICON Repair Sticks can bridge a bonding gap of max. 15 mm per work step. The specified pot life refers to a material preparation of 25g at room temperature. Larger preparation quantities result in a faster curing time due to to the typical reaction heat of epoxy resins (exothermic reaction). Higher temperatures also reduce the pot life and curing time. (General rule: every increase by +10 °C above room temperature results in a decrease of the pot life and curing time by half). Temperatures below +16 °C increase the pot life and curing time significantly. From approx. +5 °C and below, no reaction takes place.

Storage

When unopened, WEICON Repair Sticks can be stored at a constant room temperature of approx. +20°C in a dry place for at least 18 months. Protect from direct sunlight.

Scope of delivery

Adhesive

Conversion table

(°C x 1.8) + 32 = °F
mm/25.4 = inch
µm/25.4 = mil
N x 0.225 = lb
N/mm^2 x 145 = psi
MPa x 145 = psi

Nm x 8.851 = lb·in
Nm x 0.738 = lb·ft
Nm x 141.62 = oz·in
mPa·s = cP
N/cm x 0.571 = lb/in
kV/mm x 25.4 = V/mil

Available sizes

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

WEICON Middle East L.L.C.
United Arab Emirates
phone +971 4 880 25 05
info@weicon.ae

WEICON Czech Republic s.r.o.
Czech Republic
phone +42 (0) 417 533 013
info@weicon.cz

WEICON GmbH & Co. KG
(Headquaters) Germany
phone +49 (0) 251 9322 0
info@weicon.de

WEICON Romania SRL
Romania
phone +40 (0) 3 65 730 763
office@weicon.com

WEICON South East Asia Pte Ltd
Singapore
Phone (+65) 6710 7671
info@weicon.com.sg

WEICON Inc.
Canada
phone +1 877 620 8889
info@weicon.ca

WEICON Ibérica S.L.
Spain
phone +34 (0) 914 7997 34
info@weicon.es

WEICON Italia S.r.L.
Italy
phone +39 (0) 010 2924 871
info@weicon.it

WEICON SA (Pty) Ltd
South Africa
phone +27 (0) 21 709 0088
info@weicon.co.za

WEICON Kimya Sanayi Tic. Ltd. Şti.
Turkey
phone +90 (0) 212 465 33 65
info@weicon.com.tr

Epoxy Resin Systems
Repair Sticks

Repair Stick Titanium

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Epoxy Resin Systems
Repair Sticks

Repair Stick Titanium

Chemical resistance of WEICON Plastic Metals 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	-
Alkalis (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	Perchloraethylene	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	+	Hydrogen peroxide <30 % (hydrogen superoxide)	+
Impregnating oils	+	Trichloraethylene	o
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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