G-TECH 430NB

SMAW

FERRITIC - MARTENSITIC STAINLESS STEEL
430

DESCRIPTION

Basic coated electrode

This electrode is suitable for assembling and hardfacing of 15-17% Cr AISI 430 steels. Particularly suitable for refilling carbon steels subject to corrosion and abrasion. During application preheating and interpass: 150 – 260°C. Recommend heat treatment after welding (760-790°C/2h) with slow cooling (55°C/h max) until 595°C in an oven then in air at room temperature. Its basic coating ensures excellent positional welding characteristics with good gap bridging ability.

SPECIFICATIONS

ISO 3581-A	E 17 B 42	AWS A5.4	E430-15
DIN	-	Werkstoff Number	-
Certifications	-	Shielding	-
Positions	PA, PB, PC, PD, PE, PF	Current	DC+;

ASME QUALIFICATIONS

F-No (QW432)	4
A-No (QW442)	7

FERRITE

-

PREN

17.1

HARDNESS

220HB - 250HB

CHEM. COMP. %

	DEFAULT
C	0.06
Mn	0.8
Cr	17.1
P	0.02
S	0.02
Si	0.4

MECHANICAL PROPERTIES

	MIN	VARIANT
Tensile strength R_m MPa	450	420
Yield strength $R_{p0.2}$ MPa	300	270
Elongation A (L_0=5d_0) %	15	26
Impact Charpy ISO-V	-	-
Impact Charpy ISO-V	-	-

WELDING PARAMETERS

	2.5 mm	3.2 mm	4 mm	
Ampere	50A - 80A	80A - 110A	100A - 160A	150A -
Voltage	-	-	-	
Packaging	53 pcs/kg	27 pcs/kg	19 pcs/kg	12 p
Packaging Type	Carton box	Carton box	Carton box	Carto

430

DESCRIPTION

APPLICATION

This is a ferritic stainless steel exhibiting good ductility in the heat-treated condition. Applications include welding similar parent metal, weld overlay, and thermal spraying, with a primary use in surfacing sealing faces of gas, water, and steam valves to achieve stainless and wear-resistant overlays. Welding with this filler metal typically necessitates preheating, normally 150°C, and postweld heat treatment for optimal mechanical properties and corrosion resistance. The balanced composition ensures sufficient chromium for corrosion resistance in usual applications while retaining ample ductility in the heat-treated state. Additionally, there are stabilized versions with Niobium and/or Titanium designed for the automotive industry, particularly in exhaust system production, requiring similar preheating and postweld heat treatment.

ALLOY TYPE

Ferritic stainless steels.

MICROSTRUCTURE

Ferrite.

MATERIALS

Surfacing can be performed on all weldable base materials, unalloyed and low-alloyed. Welding of corrosion resistant chromium steels as well as other similar-alloyed steels with C-contents up to 0.20% (repair welding).

EN W.Nr.: 1.4001 (X7Cr14), 1.4006 (X12Cr13), 1.4057 (X17CrNi16-2), 1.4000 (X6Cr13), 1.4002 (X6CrAl13), 1.4016 (X6Cr17), 1.4059 (X17CrNi16-2), 1.4509 (X2CrTiNb18), 1.4510 (X3CrTi17), 1.4511 (X3CrNb17), 1.4512 (X2CrTi12), 1.4520 (X2CrTi17), 1.4712 (X10CrSi6), 1.4713 (X10CrAlSi7), 1.4724 (X10CrAlSi13), 1.4742 (X10CrAlSi18).

ASTM: 403, 405, 409, 410, 429, 430, 430Cb, 430Ti, 439, 431, 442.

UNS: S40300, S40500, S40900, S41000, S42900, S43000, S43035, S43036, S43100, S44200.