



DAIKOWM 430LNb



FERRITIC - MARTENSITIC STAINLESS
STEEL
430

DESCRIPTION

Nb stabilised ferritic solid wire for 17%Cr stainless steels

This wire rod deposits a ferritic Nb stabilised stainless steel with good ductility in heat treated condition. The Niobium is essential for preventing intergranular corrosion phenomena and for improving resistance at high temperature. Applications include welding of similar parental metal, weld overlay in automotive industry and in the production of exhaust systems. Welding with this filler metal usually requires preheating and post weld heat treatment.

SPECIFICATIONS

| | | | |
|----------------|----------------------------|------------------|----------|
| ISO 14343-A | G 18LNb | AWS A5.9 | (ER430) |
| DIN | - | Werkstoff Number | 1.4511 |
| Certifications | - | Shielding | M12, M13 |
| Positions | PA, PB, PC, PD, PE, PF, PG | Current | DC+ |

ASME QUALIFICATIONS

| F-No (QW432) | 6 | FERRITE | - | PREN | 18.1 | HARDNESS | 220HB - 250HB |
|--------------|---|---------|---|------|------|----------|---------------|
| A-No (QW442) | 7 | | | | | | |

CHEM. COMP. %

DEFAULT

| | |
|----|-------|
| C | 0.015 |
| Mn | 0.3 |
| Ni | 0.3 |
| Cr | 18.1 |
| Nb | 0.45 |
| P | 0.02 |
| S | 0.02 |
| Si | 0.4 |

MECHANICAL PROPERTIES

| | MIN | VARIANT |
|-------------------------------|-----|---------|
| Tensile strength R_m MPa | 410 | 420 |
| Yield strength $R_{p0.2}$ MPa | 220 | 275 |
| Elongation A ($L_0=5d_0$) % | 15 | 26 |
| Impact Charpy ISO-V | - | - |
| Impact Charpy ISO-V | - | - |

WELDING PARAMETERS

| | 1 mm | 1.2 mm |
|----------------|------------------------------------|------------------------------------|
| Ampere | 160A - 220A | 200A - 270A |
| Voltage | 25V - 29V | 26V - 30V |
| Packaging | Ø 0,8÷1,6mm | Ø 0,8÷1,6mm |
| Packaging Type | Drums, B300, D200 and D100 spools. | Drums, B300, D200 and D100 spools. |

V 01/2024



The information in this datasheet is the result of detailed research and is considered accurate as of the publication date. However, we cannot guarantee its complete accuracy, and it is subject to change without notice. Actual results may vary due to many factors like welding procedures, material composition, temperature conditions, bevel configuration, and specific manufacturing techniques. We accept no liability for any errors or omissions in this datasheet. For the most current information, please visit www.daikowelding.com.





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DESCRIPTION

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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.

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