



DAIKOWM 308LSi



AUSTENITIC STAINLESS STEELS

308L

DESCRIPTION

Solid wire for 304L base materials with silicon

These consumables are used to weld 18/8 stainless steels. Mainly applications include food industries, pharmaceutical equipment and general fabrication. Typical service temperatures are -100°C to 400°C. The higher silicon content (if compared with standard 308L) increases the welding fluidity and improve the bead appearance. Higher silicon content also improves wetting of the weld metal and potentially higher travel speeds compared to standard 308L products.

SPECIFICATIONS

| | | | |
|----------------|----------------------------|------------------|----------|
| ISO 14343-A | G 19 9 L Si | AWS A5.9 | ER308LSi |
| DIN | - | Werkstoff Number | - |
| Certifications | CE, TUV | Shielding | M12, M13 |
| Positions | PA, PB, PC, PD, PE, PF, PG | Current | DC+ |

ASME QUALIFICATIONS

| | |
|--------------|---|
| F-No (QW432) | 6 |
| A-No (QW442) | 8 |

FERRITE

| |
|---------|
| 3-12 FN |
|---------|

PREN

| |
|-------|
| 20.33 |
|-------|

HARDNESS

| |
|-------|
| 76HRB |
|-------|

CHEM. COMP. %

DEFAULT

| | |
|----|-------|
| C | 0.01 |
| Mn | 1.7 |
| Ni | 10 |
| Cr | 20 |
| P | 0.015 |
| S | 0.01 |
| Mo | 0.1 |
| Si | 0.8 |
| Cu | 0.15 |

MECHANICAL PROPERTIES

| | MIN | VARIANT |
|-------------------------------|-----|--------------|
| Tensile strength R_m MPa | 510 | 580 |
| Yield strength $R_{p0.2}$ MPa | 320 | 460 |
| Elongation A ($L_0=5d_0$) % | 25 | 40 |
| Impact Charpy ISO-V | - | 60J @ -196°C |
| 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. |

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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

Engineered for welding 18Cr/8Ni stainless steels, encompassing 301, 302, 303, nitrogen-bearing 304LN, and titanium-stabilized 321, these welding consumables offer versatile performance. They perform well in service temperatures ranging from -100°C to about 400°C, making them suitable for applications in food, brewery, pharmaceutical equipment, architectural and general fabrication, as well as nuclear engineering. It's important to note that these consumables, specifically 308L, are not recommended for elevated temperature structural applications involving 304/304H; refer to 308H for such applications. For cryogenic use at -196°C, consult 308LCF. No preheating is required, and the recommended maximum interpass temperature is 250°C, with no post-weld heat treatment necessary.

ALLOY TYPE

308L austenitic stainless steels for joining 304L base materials.

MICROSTRUCTURE

Austenite with a controlled level of ferrite, normally in the range 3-12FN depending on the application.

MATERIALS

EN W.Nr.: 1.4306 (X2CrNi19-11), 1.4301 (X5CrNi18-10), 1.4311 (X2CrNi18-10), 1.4308 (X5CrNi19-10), 1.4541 (X6CrNiTi18-10), 1.4543 (X 3 CrNiCuTi 12-9), 1.4561 (X1CrNiMoTi18-13-2), 1.4550 (X6CrNiNb18-10)+

ASTM: 304L, 304, 304LN, CF3, CF8, 321, 347.

UNS: S30403, S30400, S30453, S32100, S34700.

