

Classifications Gas-shielded flux-cored wire

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|-----------------------|-----------------------------|--------------|
| EN ISO 17633-A | AWS A5.22 | Material-No. |
| T 19 9 L R M21 / C1 3 | E 308 LT-0-1 / E 308 LT-0-4 | 1.4316 |

Characteristics and field of use

UTP AF 68 LC is a low carbon, CrNi flux-cored wire with rutile slag used for joint-welding of alloyed CrNi steels and cast steels. The weld metal shows sufficient grain stability up to 350°C and is scaling resistant up to 800°C.

Base materials

| Material-No. | 55AISI | UNS | EN Symbol |
|--------------|--------|--------|-----------------|
| 1.4300 | 302 | S30200 | X12 CrNi 18 8 |
| 1.4301 | 304 | S30400 | X5 CrNi 18 10 |
| 1.4306 | 304L | S30403 | X2 CrNi19 11 |
| 1.4311 | 304LN | S30453 | X2 CrNiN 18 10 |
| 1.4312 | 305 | J92701 | GX10 CrNi 18 8 |
| 1.4303 | 308 | S30800 | X4 CrNi 18 12 |
| 1.4541 | 321 | S32100 | X6 CrNiTi 18 10 |
| 1.4550 | 347 | S34700 | X6 CrNiNb 18 10 |

Typical analysis in %

| C | Si | Mn | Cr | Ni | Fe |
|-------|-----|-----|------|------|---------|
| 0.025 | 0.6 | 1.5 | 19.5 | 10.0 | balance |


Mechanical properties of the weld metal

| Yield strength $R_{p0.2}$ | Tensile strength R_m | Elongation A | Impact toughness K_V |
|---------------------------|------------------------|----------------|------------------------|
| MPa | MPa | % | J [RT] |
| 380 | 560 | 35 | 70 |

Welding instructions

Clean weld area thoroughly. Welding torch should be held slightly inclined, using the back-hand (drag) technique. Possibly weaving. Ar + 15 – 25 % CO₂ as shielding gas offers the best weldability. 100 % CO₂ can be also used, but the voltage should be increased by 2 V.

Welding positions



Current type DC (+)
Shielding gases: Argon + 15 - 25 % CO₂, 100 % CO₂

Approvals

TÜV (No. 06365)

Form of delivery and recommended welding parameters

| Wire diameter [mm] | Amperage | Voltage [V] |
|--------------------|-----------|-------------|
| 0.9* | 100 – 160 | 22 – 27 |
| 1.2 | 125 – 270 | 20 – 33 |
| 1.6* | 200 – 350 | 25 – 35 |

*available on request