

Classifications

| | |
|-----------------------|---------------------------|
| EN ISO 14343-A | AWS A5.9 / SFA-5.9 |
| G 23 12 L Si | ER309LSi |

Characteristics and typical fields of application

Solid wire G 23 12 L Si / ER309LSi for joining of unalloyed and low-alloyed steels and cast steel grades or stainless heat resistant Cr-steels to austenitic steels. Well-suited for depositing intermediate layers when welding clad materials. Favorably high Cr and Ni contents, low C content. Application temperature max. 300°C.

Base materials

For surfacing (buffer layer) unalloyed or low-alloyed steels and when joining non-molybdenum-alloyed stainless and carbon steels. Joints and mixed joints between austenitic steels with ferritic steels to pressure boiler steels P295GH and fine grained structural steels to P355N, ship building steel grades A – E, AH 32 – EH 36, A40 – F40, etc.

Typical analysis

| | C | Si | Mn | Cr | Ni |
|-------|------|-----|-----|----|------|
| wt.-% | 0.03 | 0.9 | 2.0 | 24 | 13.0 |

Mechanical properties of all-weld metal - typical values (min. values)

| Condition | Yield strength R _{p0.2} | Tensile strength R _m | Elongation A (L ₀ =5d ₀) | Impact energy ISO-V KV J |
|-----------|----------------------------------|---------------------------------|---|--------------------------|
| | MPa | MPa | % | 20°C |
| u | 400 | 550 | 30 | 55 |

u untreated, as-welded – shielding gas Ar + 2.5% CO₂

Operating data

| Polarity | DC + | Dimension mm |
|---------------------------------|----------|--------------|
| Shielding gas (EN ISO 14175) | M12, M13 | 0.8 |
| | | 1.0 |
| | | 1.2 |

Approvals

TÜV (19796), DB (43.132.91), CE