# Cromamig 307Si

GMAW - MIG MAG

Stainless Steel

Date: 2008-01-22
Revision: 8

**Description:**
Cromamig 307Si produces a tough, ductile, 19% Cr / 9% Ni / 7% Mn austenitic stainless weld metal which is highly crack resistant. It is intended for joining hardenable steels, armour plate, 13% Mn steels and difficult-to-weld steels, without the need for preheat. It is also recommended for dissimilar joints between stainless and mild or medium carbon steels. Welds produced with Cromamig 307Si can be PWHT without risk of sigma-phase formation and consequent loss of ductility. The deposit work hardens from 200 HV to 450 HV.
APPLICATIONS: Buffer layers on 13% Mn steels used in rock crushing and earth moving equipment, prior to hardfacing. Reclaiming 13% Mn steels. Surfacing of rails, rail crossings, frogs etc. Buffer layers in highly restrained repair work.

**Welding current:**
DC+

**Wire composition, wt.%**

| | C | Si | Mn | P | S | Cr | Ni |
|---|---|---|---|---|---|---|---|
| Min | | 0,65 | 5,5 | | | 17,0 | 7,5 |
| Typical | 0,08 | 0,85 | 7,0 | 0,025 | 0,02 | 19,0 | 9,0 |
| Max | 0,20 | 1,0 | 7,5 | 0,030 | 0,030 | 20,0 | 9,5 |

| | Mo | Cu | N |
|---|---|---|---|
| Min | | | |
| Typical | 0,2 | 0,2 | |
| Max | 0,3 | 0,3 | 0,07 |

**Shielding gas:**
Acc. to EN 439:
M12, Ar + 1-3% O2, 16-21 l/min
M13, Ar + 2% CO2, 16-21 l/min

**Chemical composition, wt.%**

| | C | Si | Mn | Cr | Ni |
|---|---|---|---|---|---|
| Min | | | | | |
| Typical | 0,07 | 0,8 | 6,0 | 18,0 | 8,0 |
| Max | | | | | |

**Mechanical properties**

| | Specified | Typical |
|---|---|---|
| Yield strength, Rp0.2%: | ≥ 350 MPa | 380 MPa |
| Tensile Strength, Rm: | ≥ 590 MPa | 600 MPa |
| Elongation, A5 | ≥ 30% | 40% |
| Impact energy, CV: | | 20°C • 100 J |

**Classification:**

| | |
|---|---|
| EN ISO 14343 | G 18 8 Mn |
| AWS A5.9 | ~ER307 |

**Approvals:**

| | |
|---|---|
| DB | Kennblatt Nr 43.042.10 |
| TÜV | |
| CE | |

**Note**

AWS A5.9-95: Slight deviation in Cr, Mn and Si-content.

**Product data**

| Diam.mm | Product code | Dip Current A | Dip Voltage V | Spray Current A | Spray Voltage V |
|---|---|---|---|---|---|
| 0,8 | 9824-2008 | 60-100 | 18-21 | 150-170 | 24-26 |
| 1,0 | 9824-2010 | 75-140 | 18-21 | 170-200 | 26-28 |
| 1,2 | 9824-2012 | 130-160 | 18-21 | 175-250 | 26-28 |