

Classifications

TIG rod

| | | |
|----------------|---------------|--------------|
| EN ISO 14343-A | AWS A5.9 | Material-No. |
| W 23 12 L (Si) | ER 309 L (Si) | 1.4332 |

Characteristics and field of use

UTP A 6824 LC ist used for joining and surfacing in chem. apparatus and vessel construction for working temperatures up to +300°C. Weld cladding of non- and low-alloyed base materials. Dissimilar joints.

Base materials

| | |
|--------|---------------------|
| 1.4306 | X2 CrNi 19-11 |
| 1.4401 | X5 CrNiMo 17-12-2 |
| 1.4404 | X2 CrNiMo 17-13-2 |
| 1.4541 | X6 CrNiTi 18-10 |
| 1.4550 | X6 CrNiNb 18-10 |
| 1.4571 | X6 CrNiMoTi 17-12-2 |
| 1.4580 | X6 CrNiMoNb 17-12-2 |

Joining these materials with unalloyed and low-alloyed steels is possible.

Typical analysis in %

| | | | | | |
|------|-----|-----|------|------|---------|
| C | Si | Mn | Cr | Ni | Fe |
| 0.02 | 0.4 | 1.8 | 23.0 | 13.5 | balance |

Mechanical properties of the weld metal

| | | | |
|---------------------------------------------|------------------------------------------|----------------------------------|-----------------------------------------|
| <i>Yield strength $R_{p0.2}$</i> | <i>Tensile strength R_m</i> | <i>Elongation A</i> | <i>Impact strength K_v</i> |
| <i>MPa</i> | <i>MPa</i> | <i>%</i> | <i>J [RT]</i> |
| 400 | 590 | 30 | 140 |

Welding instructions

Welding area must be thoroughly cleaned to metallic bright and degreased. Heat-resistant Cr-steels or cast steels have to be preheated according to the base metal. No preheating for similar austenitic steels.

Approvals

TÜV (No. 05391)

Form of delivery and recommended welding parameters

| | | |
|-----------------------------------|---------------------|-------------------------------------|
| <i>Rod diameter x length [mm]</i> | <i>Current type</i> | <i>Shielding gas (EN ISO 14175)</i> |
| 1.6 x 1000 | DC (-) | I 1 |
| 2.0 x 1000 | DC (-) | I 1 |
| 2.4 x 1000 | DC (-) | I 1 |
| 3.2 x 1000 | DC (-) | I 1 |