



FLUX UP LA01

Agglomerated Rutile Welding Flux

Classification

ISO 14174 S A AR 1 76 AC H5

Description & Applications

Aluminate-Rutile Flux for submerged arc welding (SAW-process) for joint welding of low-alloy structural and boiler quality steels with yield strengths (Ys) up to 355MPa. The flux shows constant metallurgical characteristics.

Flux UP LA01 is formulated to achieve high speed welding (up to 2/ m/min), good weld bead appearance and easy slag removal (even in fillet welding).

Recommended to use for single-run, two-run and fillet welding.

Wires recommended for

| ISO 14171-A | AWS A5.17 |
|--------------------|------------------|
| S1 | EL12 |
| S2 | EM12 |
| S2Si | EM12K |
| S2Mo | EA2 |
| ISO 24958-A | AWS A5.23 |
| S S CrMo1 | EB2 |

Typical Chemical Composition (%)

| SiO ₂ + TiO ₂ | Al ₂ O ₃ + MnO | CaO + MgO | CaF ₂ | Basicity according To Boniszewski |
|-------------------------------------|--------------------------------------|-----------|------------------|--------------------------------------|
| 25 | 55 | 5 | 10 | ~0.6 |

Flux Properties

| Density (kg / dm ³) | Grain size ISO 14174 | Current carrying capacity |
|----------------------------------|----------------------|--------------------------------------|
| 1.0 | 2 - 16 ; Tyler 10x65 | Up to 800A (AC or DC) using one wire |

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All Weld Metal Typical Chemical analysis (%)

| Wire | C | Si | Mn | Cr | Mo |
|-----------|-----------|---------|---------|-----|---------|
| S1 | 0.04-0.08 | 0.3-0.6 | 0.8-1.1 | | |
| S2 | 0.04-0.08 | 0.3-0.6 | 1.0-1.4 | | |
| S2Si | 0.04-0.08 | 0.4-0.8 | 1.0-1.4 | | |
| S2Mo | 0.04-0.08 | 0.3-0.7 | 1.0-1.4 | | 0.4-0.6 |
| S S CrMo1 | 0.04-0.08 | 0.3-0.7 | 0.9-1.3 | 1.0 | 0.4-0.6 |

All Weld Metal Typical Mechanical Properties

| Wire | R _{p0.2} (MPa) | R _m (MPa) | A (%) | KV (J) | | |
|-------------|----------------------------|-------------------------|----------|--------|-----|-------|
| | | | | +20°C | 0°C | -20°C |
| S1 | >400 | >510 | >24 | >70 | >40 | |
| S2 | >420 | >530 | >22 | >70 | >47 | |
| S2Si | >430 | >540 | >22 | >70 | >47 | >27 |
| S2Mo | >480 | >580 | >20 | >60 | >47 | >27 |
| S S CrMo1 * | >470 | >570 | >20 | >50 | | |

* After PWHT at 680°C/10h

Storage Recycling and Drying

It is recommended to store and use the flux up to 1 year after delivery in dry storage rooms. Nevertheless, the flux can be used even if stored for more than one year, just requires the user to make a weldability test to check if all is well.

Drying conditions specific to the flux: 200 ± 50°C. Supplied in moisture proof packaging.