# SF-1E

AWS A5.36 E71T1-C1A2-CS1 / AWS A5.36M E491T1-C1A3-CS1
EN ISO 17632-A: T 42 2 ZMnNi P C1 1 H5
EN ISO 9606-1: FM1

**General purpose flux cored wire for shipbuilding and structures with 100% $CO_2$ shielding gas.**

## General description:

SF-1E is a seamless, rutile flux cored wire for welding with 100% $CO_2$ shielding gas.
Due to the seamless design the wire has an extremely low diffusible hydrogen content, typical 2.7ml/100g weld metal.
The flux cored wire has excellent weldability in all positions and is extremely efficient in the root pass against ceramic backing.
Good penetration in vertical down greatly reduces the risk of imperfections.
It also gives excellent performance against porosity on primed steel plates when using automated welding such as a fillet welding tractor.
SF-1E has a stable welding arc with less spatter and perfect bead surface.
The flux cored wire has a clean, copper coated surface.
Together with exact diameter and roundness it provides a stable and even wire feeding.
This reduces wear and tear of liners and contact tips.
The wire is classified as a grade 3 (-20 °C).

## Welding positions:

## Welding current:

DC+

## Type of gas / flow:

100% $CO_2$

18-25 l/min.

## Typical chemical composition of all-weld-metal:

| C | Si | Mn | P | S | Ni | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0,06 | 0,38 | 1,20 | 0,011 | 0,007 | 0,30 | | | | |

## Diffusible hydrogen content (ml/100g):

≤5 ml/100g (2,7 ml/100g typical)

## Typical mechanical properties of all-weld-metal:

| Yield and Tensile Strengths | | | Charpy Impact Test | |
|---|---|---|---|---|
| Yield Mpa | Tensile Mpa | Elongation % | Charpy V (J) -20 ºC | |
| 530 | 590 | 27 | 100 | |

## Guidance - Ampere (DC+):

| Wire diameter | 1,2 mm | 1,4 mm | |
|---|---|---|---|
| Ampere / Volt | 180–300A / 22-32V | 250-350A / 25-33V | |

## Packaging information:

1,2mm x 5,0kg spool D200
1,2mm x 12,5kg spool D300
1,4mm x 12,5kg spool D300

## Approvals:

DNV-GL, LR, ABS, GL, CWB, PRS, Rina, BV, CE

## Reference / date:

SF-1E, English, 20.08.2020