SF-3E

AWS A5.29 E81T1-GC-H4
EN ISO 17632-A: T 46 4 ZMn P C1 2 H5
EN ISO 9606-1: FM1

Flux cored wire for low temperature steels with impact requirements down to -40 °C.

General description:

SF-3E is a seamless rutile flux cored wire for welding with 100% CO_2 shielding gas.
The deposited weld metal has excellent mechanical properties down to -40°C.
The wire has a stable arc, minimum spatter, good penetration with excellent visual results.
SF-3E can also be used for root runs against ceramic backing.
Due to its seamless design, the wire has an extremely low hydrogen content which does not pick up moisture from the environment ensuring a very low risk of hydrogen cracks (Typical 3.0ml/100g).

The SF-3E wire has a clean copper coated surface with exact diameter and roundness which ensures stable and even wire feeding.
Mechanical properties have been designed for charpy impact values ≥ 47joule at -40°C.
The wire is CTOD tested.

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	Mo			
0,05	0,40	1,32	0,015	0,003	0,46	0,01			

Diffusible hydrogen content (ml/100g):

≤5 ml/100g (3,0 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) -40 ºC	
564	597	29	121	

Guidance - Ampere (DC+):

Wire diameter	1,2 mm		
Ampere / Volt	180–300A / 22-32V		

Packaging information:

1,2mm x 5,0kg Spool
1,2mm x 12,5kg Spool

Approvals:

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

Reference / date:

SF-3E, English, 20.04.2026.