

SM-3A

AWS A5.18 E70C-GM H4
 EN ISO 17632-A T42 4 ZMn M M21 1 H
 EN ISO 17632-B T49 4 T15-1 M A-U H5

Seamless metal cored wire for structural steel welding with Ar-CO₂ mixed gas.

GENERAL DESCRIPTION

SM-3A is designed for both automated and manual welding of horizontal butt welds and fillet welds. It can also be successfully used for all positional welding in the short arc range (dip transfer mode).

SM-3A consists mainly of metal flux powder so has a high deposition efficiency as well as fast deposition rate.

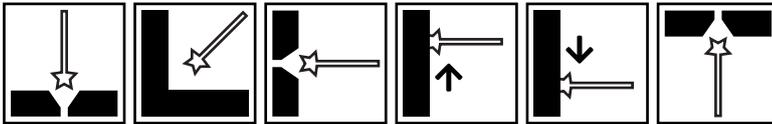
The seamless wire maintains its very low (typically 2ml/100g) hydrogen levels over time with no open seam to allow moisture pick-up. The double copper

coating gives further protection, excellent conductivity for a stable welding arc and, together with exact diameter and shape ensures stable, even wire feeding. These characteristics make the wire ideal for automated processes on robots or when long conduit cables are used.

SM-3A has low spatter and fume. The minimal surface silica isles allow for welding multi-layers without the need for de-slugging between passes.

SM-3A is classified as Grade 4 (-40 °C).

WELDING POSITIONS



TYPE OF GAS FLOW:

Ar + 15 < CO₂ < 25%, (80%Ar / 20% CO₂ recommended). 20-25 l/min.

TYPICAL CHEMICAL COMPOSITION OF ALL-WELD-METAL (%)

Shield Gas	C	Si	Mn	P	S			
Ar+20%CO ₂	0.05	0.66	1.69	0.008	0.013			

DIFFUSABLE HYDROGEN CONTENT: ≤5 ML/100G (2.0 ML/100G TYPICAL)

TYPICAL MECHANICAL PROPERTIES OF WELD METAL

Yield and Tensile Strengths			Charpy Impact Test
Yield MPa	Tensile MPa	Elongation %	Charpy 2V-notch, (J) -40°C
540	600	29	72

GUIDANCE – AMPERE (DC+)

Wire Diameter	1.2 mm	1.4 mm	
Ampere	70-330	80-420	

PACKAGING INFORMATION

1.2mm x 5kg spool 1.4mm x 15kg spool
 1.2mm x 15kg spool 1.4mm x 250kg drum
 1.2mm x 250kg drum

SHIPPING APPROVALS

DNV-GL, LR, ABS, BV

REFERENCE

SM-3A, English