



PHOENIX SAW WIRE



PHOENIX EM12K



Grade :- AWS SFA 5.17 EM12K

Submerged arc welding wire AWS EM12K, is a medium manganese, medium silicon type wire. It is used with medium manganese and medium silicon type welding flux. It is insensitive to rust stains on the base metal. It has excellent bead forming and slag removal properties.

EM12K submerged arc welding wire has a higher carbon, manganese and silicon content than EL12. the increased carbon content gives this wire greater tensile strength, while the increased manganese and silicon content improves deoxidation properties. EM12K will produce weld deposits with minimal porosity, even on rust and oxide skins that may be present on the base material. This wire is primarily used for single-pass butt and fillet welds on low-carbon and low-alloy steel plates up to 1/2 inch thick.

Single and multi-pass welding with recommended fluxes, unalloyed and fine-grain steels, general fabrication, structural components, heavy equipment components, railcar frames, wheel fabrication, storage tanks, boilers, pressure vessels, ship plates, pipe double joints, wind towers

Sizes (mm) :- 1.60, 2.00, 2.50, 3.15

**Packaging :- 25 Kg Metallic Ring Packed in Corrugated Box
100 Kg and 250 Kg Drum**

Chemical Composition of Solid Wire						
Elements %	C	Mn	Si	S	P	Cu
Range	0.05-0.15	0.80-1.25	0.10-0.35	0.030 Max	0.030 Max.	0.35 Max.
Typical	0.09	0.95	0.25	0.025	0.024	0.18

Chemical Composition of Undiluted Weld Metal (Flux :- Phoenix F7A0EM12K)						
Elements %	C	Mn	Si	S	P	Cu
Typical	0.075	1.20	0.50	0.029	0.025	0.15

All Weld Mechanical Properties				
	UTS (MPA)	YS (MPA)	YS (MPA)	CVN Impact Value Joule at -20°C
Typical	420	510	25%	40

PHOENIX EL8



Grade :- AWS SFA 5.17 EL8

Phoenix EL8 is copper coated low-manganese general purpose solid wire. Wire is used with Phoenix neutral or semi basic flux for welding of general purpose fabrication, off-shore platform, medium and high tensile structural steels, ships, boiler and pressure vessels applications etc. The product easily removable residue, good seam forming and highly efficient deposition. The seam surface is smooth and welding quality is guaranteed. They facilitate mechanical and automatic welding process.

Sizes (mm) :- 1.60, 2.00, 2.50, 3.15

Packaging :- 25 Kg Metallic Ring Packed in Corrugated Box
100 Kg and 250 Kg Drum

Chemical Composition of Solid Wire						
Elements %	C	Mn	Si	S	P	Cu
Range	0.10 Max	0.25 - 0.60	0.07 Max	0.030 Max.	0.030 Max.	0.35 Max.
Typical	0.075	0.50	0.04	0.025	0.020	0.20

Chemical Composition of Undiluted Weld Metal (Flux :- Phoenix F7AZEL8)						
Elements %	C	Mn	Si	S	P	Cu
Typical	0.05	1.15	0.38	0.025	0.030	0.15

All Weld Mechanical Properties				
	UTS (MPA)	YS (MPA)	YS (MPA)	CVN Impact Value Joule at 0°C
Typical	410	500	26%	30

PHOENIX EH14



Grade :- AWS SFA 5.17 EH14
EN ISO 14171-B SU41

Phoenix EH14 is copper coated Medium-manganese solid wire. Wire is used with Phoenix neutral or semi basic flux for welding of general purpose fabrication, off-shore platform, medium and high tensile structural steels, ships, boiler. It is not sensitive to the rust on the base metal. It has excellent bead molding and slag detachability. The wire can be applied single or dual feeding with AC/DC.

Sizes (mm) :- 1.60, 2.00, 2.50, 3.15

Packaging :- 25 Kg Metallic Ring Packed in Corrugated Box
100 Kg and 250 Kg Drum

Chemical Composition of Solid Wire						
Elements %	C	Mn	Si	S	P	Cu
Range	0.10-0.20	1.70-2.20	0.10 Max	0.030 Max	0.030 Max.	0.35 Max.
Typical	0.15	1.75	0.07	0.027	0.026	0.21

Chemical Composition of Undiluted Weld Metal (Flux :- Phoenix F7A2EH14)						
Elements %	C	Mn	Si	S	P	Cu
Typical	0.16	1.75	0.40	0.029	0.026	0.15

All Weld Mechanical Properties				
	UTS (MPA)	YS (MPA)	YS (MPA)	CVN Impact Value Joule at -29°C
Typical	535	420	26%	75

PHOENIX EA2



Grade :- AWS SFA 5.17 EA2
EN ISO 14171-B SU2M3

Phoenix EA2 is copper coated low alloy solid wire to be used with basic flux for welding of high tensile fine grain steel as well as steel which required high ductility. The weld metal has good elevated temperature properties and improved corrosion resistance.

Sizes (mm) :- 1.60, 2.00, 2.50, 3.15

Packaging :- 25 Kg Metallic Ring Packed in Corrugated Box
100 Kg and 250 Kg Drum

Chemical Composition of Solid Wire

Elements %	C	Mn	Si	S	P	Mo	Cu
Range	0.05-0.17	0.95-1.35	0.20 Max	0.025 Max	0.025 Max	0.45-0.65	0.35 Max.
Typical	0.12	1.15	0.15	0.020	0.022	0.50	0.20

Chemical Composition of Undiluted Weld Metal (Flux :- Phoenix F7A2EA2)

Elements %	C	Mn	Si	S	P	Mo	Cu
Typical	0.10	1.40	0.60	0.020	0.022	0.50	0.15

All Weld Mechanical Properties

	UTS (MPA)	YS (MPA)	YS (MPA)	CVN Impact Value Joule at -29°C
Typical	615	525	27%	85

PHOENIX EA4



Grade :- AWS SFA 5.17 EA4
EN ISO 14171-B SU2M31

Phoenix EA2 is copper coated Manganese alloy solid wire to be used with non alloying or slightly alloying fluxes for welding of medium & high strength structural steels. The weld metal has good elevated temperature properties and improved corrosion resistance.

Sizes (mm) :- 1.60, 2.00, 2.50, 3.15

Packaging :- 25 Kg Metallic Ring Packed in Corrugated Box
100 Kg and 250 Kg Drum

Chemical Composition of Solid Wire

Elements %	C	Mn	Si	S	P	Mo	Cu
Range	0.05-0.15	1.20-1.70	0.20 Max	0.025 Max	0.025 Max	0.45-0.65	0.35 Max.
Typical	0.78	1.50	0.025	0.015	0.015	0.50	0.18

Chemical Composition of Undiluted Weld Metal (Flux :- Phoenix F7A2EA4)

Elements %	C	Mn	Si	S	P	Mo	Cu
Typical	0.075	1.55	0.50	0.019	0.020	0.49	0.15

All Weld Mechanical Properties

	UTS (MPA)	YS (MPA)	YS (MPA)	CVN Impact Value Joule at -30°C
Typical	608	530	27%	88

PHOENIX SAW FLUX



Phoenix SAW Flux is an alumina-rutile type acidic flux to weld medium tensile structural steels. The slag is easily removable and bead finish is smooth & shiny. Weld deposit is of radiographic Quality.

Phoenix SAW Flux is suitable for single and multi layer winding of various structural & Pressure vessel, machine building and fabrication of earthmoving equipment, crane gridders, ships, locomotives, etc.

Grade :- AWS SFA 5.17 F7A0EM12K, F7AZEL8

Grain Size :- 0.35

Re-Drying Conditions :- 300-350°C for 2 Hr

Packaging :-



25 Kgs Bag with Linner bag



Steel Drum :- 200 kgs

All Weld Analysis, WT%

Elements %	C	Mn	Si	S	P
Specification	0.05	1.10	0.35	0.027	0.028

All Weld Mechanical Propertes

UTS (MPA)	0.2% YS (MPA)	YS (MPA)	CVN Impact Value Joule at 0°C
500	410	26 %	30