AV 1
SAW WIRE

STANDARD
AWS SFA 5.17

CLASSIFICATION
EL- 8

Description

AV-1 is a copper coated EQ grade steel wire for Submerged Arc Welding (SAW) of mild and medium carbon structural steel. This grade of wire is widely used in welding of LPG cylinders, steel pipes and structures.

Chemical Composition of Welding Wire (%)

Wire Grade	C	Mn	Si	S	P	Cu
EL 8	0.10 max	0.25/0.60	0.07 max	0.03 max	0.03 max	0.35 max

Packing data

Dia 2.00 mm	Weight 25 kg Rim.
Dia 2.50 -5.00 mm	Weight 25 kg Rim & 250/500 kg Drum.

Approval : BHEL

AV 2
SAW WIRE

STANDARD
AWS SFA 5.17

CLASSIFICATION
EM- 12K

Description

AV-2 is a medium manganese alloyed copper coated wire for Submerged Arc Welding (SAW) and Electroslag Welding of medium and high tensile steel. It contributes to high impact values of weld metal, when combined with flux like AV EZEWeld Flux 17L.

Chemical Composition of Welding Wire (%)

Wire Grade	C	Mn	Si	S	P	Cu
EM12K	0.05/0.15	0.80/1.25	0.10/0.35	0.03 max	0.03 max	0.35 max

Packing data

Dia 2.00 mm	Weight 25 kg Rim.
Dia 2.50 -5.00 mm	Weight 25 kg Rim & 250/500 kg Drum.

Approval : BHEL

AV 3
SAW WIRE

STANDARD
AWS SFA 5.17

CLASSIFICATION
EH-14

Description

AV-3 is a copper coated manganese alloyed Submerged Arc Welding (SAW) wire for welding of medium and high tensile steel.

Chemical Composition of Welding Wire (%)

Wire Grade	C	Mn	Si	S	P	Cu
EH14	0.10/0.20	1.70/2.20	0.10 max	0.03 max	0.03 max	0.35 max

Packing data

Dia 1.60 - 2.00 mm	Weight 25 kg Rim.
Dia 2.50 - 5.00 mm	Weight 25 kg Rim & 250/500 kg Drum.

AV 4
SAW WIRE

STANDARD
AWS SFA 5.23

CLASSIFICATION
EA-2

Description

AV-4 is used for Submerged Arc Welding (SAW) and Electroslag Welding of unalloyed and low alloy steel with impact requirements higher than those obtainable with mild steel filler wires. Also suitable for multi run techniques.

Chemical Composition of Welding Wire (%)

Wire Grade	C	Mn	Si	S	P	Mo	Cu
EA-2	0.05/0.17	0.95/1.35	0.20 max	0.025 max	0.025 max	0.45/0.60	0.35 max

Packing data

Dia 2.00 mm	Weight 25 kg Rim.
Dia 2.50 -5.00 mm	Weight 25 kg Rim & 250/500 kg Drum.

AV 5
SAW WIRE

STANDARD
AWS SFA 5.17

CLASSIFICATION
EH-10K

Description

AV-5 is used for Submerged Arc Welding (SAW) and Electroslag Welding application in ship building, structural steel job and pressure vessels fabrication with very good low temperature impact properties.

Chemical Composition of Welding Wire (%)

Wire Grade	C	Mn	Si	S	P	Cu
EM10K	0.07/0.15	1.30/1.70	0.05 /0.25	0.025 max	0.025 max	0.35 max

Packing data

Dia 2.00 mm Weight 25 kg Rim.

Dia 2.50 -5.00 mm Weight 25 kg Rim & 250/500 kg Drum.

AV EZEWELD GR 26

SAW FLUX

CLASSIFICATION
Flux & Wire
AV EZEweld Flux GR26/EA-2
AV EZEweld Flux GR26/EH-10K

SPECIFICATION
ASME SFA 5.23/ 5.17
AWS A5.23-F8A4/F8P4-EA2
AWS A-5.17-F8A4/F8P4-EH10K

Description

AV EZEWeld GR 26 is a all mineral non-alloying flux and the weld metal can be fully controlled independently of the welding parameters through suitable choice of wires. This makes AV EZEWeld GR 26 suitable for multi run welding of thick materials using single wire as well as multiple wire technique. AV EZEWeld GR 26 is designed for multipass welding of mild, medium and high tensile steels as well as low alloyed steel with impact strength requirements between -40°C and -60°C. It allows for high current carrying capacity on DC^+ is specially suited for narrow gap welding due to its excellent slag detachability and and smooth blending with the side walls.

Typical Application

Pressure vessels for nuclear applications and offshore constructions where good CTOD values required are the areas where AV EZEWeld GR 26 is successfully used. AV EZEWeld GR 26 gives the weldmetal a low oxygen content (approx. 300 ppm) and low hydrogen content deposit (lower than 5 ml/100 g).

Basicity Index 3.20

Typical All Weld Metal Chemical & Mechanical Properties

CHEMICAL COMPOSITION (%)							MECHANICAL PROPERTIES			
AV EZEWELD Flux 17L	C	Mn	Si	Mo	S	P	Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Elongation (%)	Impact Values Charpy V notch
EA2 (AW)	0.10	1.2	0.25	0.47	<0.03	<0.03	550	650	26	55 J at (-) 40°C
EA2 (PWHT)	0.10	1.2	0.25	0.47	<0.03	<0.03	540	640	29	60 J at (-) 40°C
EH10K (AW)	0.10	1.8	0.30	--	<0.03	<0.03	560	650	27	50 J at (-) 40°C
EH10K (PWHT)	0.10	1.8	0.30	--	<0.03	<0.03	550	640	30	60 J at (-) 40°C

AW: As welded **PWHT :** After post weld heat treatment at 620°C for 1 hour

] **Current / Polarity :** DC^+

Note on Usage

- Dry the Flux at 300-350°C (572-662°F) for 120 minutes before use.
- For the first layer in groove, keep the current and speed low in the case of multi-layer welding.

Packing data

Poly Lined HDEP Bags (Standerd) Weight 25 kg.
Steel Drum (on demand) Weight 250 kg.

AV EZEWELD FLUX GR 1

SAW FLUX (Fused)

CLASSIFICATION
Flux & Wire
AV EZEweld Flux GR 1/ EL-8

SPECIFICATION
ASME SFA 5.17
AWS A 5.17-F7AZ/ F7PZ-EL-8

Description

AV EZWeld Flux GR 1 is a manganese silicate neutral FUSED flux suitable for submerged arc welding for HARD FACING applications with excellent welding characteristics using EL-8 / SA-12 wires. This wire and flux combination provides uniform and good bead shape and excellent surface condition. The slag removal is very easy and in most cases self peeling. It has good resistance to scale or dirty plates. Moisture pick up is minimal.

Typical Application

A V EZWeld Flux GR 1 can be used for all types of general applications viz. Railway Wheels and Wagons; Boilers and Pressure Vessels; LPG Cylinders; Bridges and Ship building; etc., Excellent wear resistance properties are obtained when used with EL-8/SA-12 wire on Railway Wheels. It is specially suitable for MULTILAYER welding.

Basicity Index 1.0

Typical All Weld Metal Chemical & Mechanical Properties EL 8

CHEMICAL COMPOSITION (%)						MECHANICAL PROPERTIES			
AV EZEWELD Flux 17L	C	Mn	Si	S	P	Yield Strength (N/mm2)	Tensile Strength (N/mm2)	Elongation (%)	Impact Values Charpy V notch
EL-8	0.07	1.00	0.35	<0.03	<0.03	460	530	27	--

Weld Metal Hardness with SA-12 Wire of Chemical Composition (%)

C	%Mn	%Si	Cr	%S	%P
0.33-0.45	0.92-1.35	0.36-082	0.84-1.29	0.011-0.017	0.015-0.028
Hardness			240-290 BHN		

] **Current / Polarity :** DC^{+}

Note on Usage

- Dry the Flux at 300-350°C (572-662°F) for 60 minutes before use.
- For the first layer in groove, keep the current and speed low in the case of multi-layer welding.

Packing data

Poly Lined HDEP Bags (Standerd) Weight 25 kg.
Steel Drum (on demand) Weight 250 kg.

AV EZEWELD FLUX 17L

SAW FLUX

CLASSIFICATION

Flux & Wire

AV EZEweld Flux 17L/EM-12K
AV EZEweld Flux 17L/EH-14

SPECIFICATION

ASME SFA 5.17

AWS A 5.17-F7A4/F7P4-EM12K
AWS A 5.17-F8A2/F8P2-EH14

Description

AV EZEWeld Flux 17L is an aluminate basic agglomerated flux for submerged arc welding bearing very high current carrying characteristics for DC^+. It has very good operational properties for both single and multi wire systems. It gives excellent impact values at very law temperature and very low oxygen in welding.

Typical Application

AV EZEWeld Flux 17L can be used for fillet welding and single / pass butt welding of mild , medium and high tensile steel. The required strength of the weld metal is achieved by proper selection of alloyed wires. It is used for narrow gap welding due to superior slag detachability and smooth blending of weld bead with joint side walls.

Basicity Index 1.6

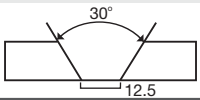
Typical All Weld Metal Chemical & Mechanical Properties

CHEMICAL COMPOSITION (%)						MECHANICAL PROPERTIES			
AV EZEWELD Flux 17L	C	Mn	Si	S	P	Yield Strength (N/mm2)	Tensile Strength (N/mm2)	Elongation (%)	Impact Values Charpy V notch
EM-12K (AW)	0.07	1.20	0.60	<0.03	<0.03	460	590	25%	50 J at (-) 40°C
EM-12K (PWHT)	0.07	1.20	0.60	<0.03	<0.03	450	580	28%	60 J at (-) 40°C
EH-14 (AW)	0.10	1.80	0.30	<0.03	<0.03	480	570	23%	40 J at (-) 29°C
EH -14 (PWHT)	0.10	1.80	0.30	<0.03	<0.03	470	560	26%	50 J at (-) 29°C

AW: As welded **PWHT :** After post weld heat treatment at 620°C for 1 hour

] **Current / Polarity :** DC^+

Typical Welding Conditions

Plate Th. (mm)	Groove Design	Dia (Wire) (mm)	No. Pass	Amp. (A)	Volt. (V)	Cpm. (cm/min)	Remarks
25		3-15 4-0	1-13 1-13	500 570	28 30	40 40	AWS A5.17

Note on Usage

- Dry the Flux at 300-350°C (572-662°F) for 60 minutes before use.
- Pay attention to welding voltage. Excessive welding voltage causes deterioration of joint Properties.
- Add new Flux periodically to prevent the weld defects and bad appearance which occurs when continuously reusing the flux.

Packing data

Poly Lined HDEP Bags (Standerd) Weight 25 kg.
Steel Drum (on demand) Weight 250 kg.

AV EZEWELD FLUX 18L

SAW FLUX

CLASSIFICATION

Flux & Wire

AV EZEweld Flux 18L/EL-8
AV EZEweld Flux 18L/EM-12K

SPECIFICATION

ASME SFA 5.17

AWS A 5.17-F7A0/F7P0-EL-8
AWS A 5.17-F7A2/F7P2-EM12K

Description

AV EZEWeld Flux 18L is an agglomerated acid silicon and manganese alloying flux for submerged arc welding applications providing excellent welding characteristics for High speed Welding. the bead is uniform and appearance is good with no tendency to under cutting. the slag removal is easy and in most cases it is self peeling. It offers excellent radiographic weld joints and mechanical properties.

Typical Application

AV EZEWeld Flux 18L can be used for all types of general applications in low and medium tensile steel, in combination with EL-8 or EM-12K grades of wire. This flux is specially recommended for applications requiring high dilution of base metal i.e. in fillet and butt welding of thin and medium thic plates viz. Boiler/ Pressure Vessels, LPG Cylinders, Pipes, General Structural Fabrications, etc.

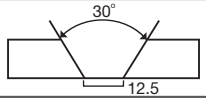
Basicity Index 1.0

Typical All Weld Metal Chemical & Mechanical Properties

CHEMICAL COMPOSITION (%)						MECHANICAL PROPERTIES		
AV EZEWELD Flux 18L	C	Mn	Si	S	P	Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Values Charpy V notch
EL-8	0.08	0.80	0.40	<0.03	<0.03	460	550	40 J at 0°C
EM-12K	0.07	1.20	0.40	<0.03	<0.03	450	580	50J at (-) 29°C

] **Current / Polarity :** DC^+

Typical Welding Conditions

Plate Th. (mm)	Groove Design	Dia (Wire) (mm)	No. Pass	Amp. (A)	Volt. (V)	Cpm. (cm/min)	Remarks
25		3.15 4.0	1.13 1.13	500 570	28 30	40 40	AWS A5.17

Note on Usage

- Dry the Flux at 300-350°C (572-662°F) for 60 minutes before use.
- For the first layer in groove, keep the current and speed low in the case of multi-layer welding.

Packing data

Poly Lined HDEP Bags (Standerd) — Weight 25 kg.
Steel Drum (on demand) — Weight 250 kg.