

AUTOMELT B31

AWS Classifications:

With Wire	AWS 5.17/5.23	AWS 5.17M/5.23M
Automelt EA14	F7A4/P4 - EH14	F48A4/P4 - Eh14
Automelt EA3	F8A2/F7P4 - EA3-A3	F55A3/F49P4-EA3-A3

Approvals:

ABS, LRA, BV, DNV, IRS, MND

Characteristics:

Automelt B31 is Aluminate fluoride-basic type of submerged arc welding flux. It is neutral flux with no Si and Mn pickup. It gives X-ray quality welds with good impact properties. It is ideal for welding of thick-walled vessels.

Basicity	Wall Neutrality No.	Grain Size (mm)
1.5*	7	0.25-1.60

*-As per Boniszewski

Flux Analysis:

SiO ₂ + TiO ₂	CaO + MgO	Al ₂ O ₃ + MnO	CaF ₂
15 %	20 %	30 %	35 %

All Weld Metal Chemistry, wt% (Typical):

With wire	C	Mn	Si	S	P	Mo
Automelt EH14	0.07	1.50	0.40	<0.03	<0.03	-
Automelt EA3	0.06	1.55	0.50	<0.03	<0.03	0.45

All weld metal properties:

With wire	Condition	UTS Mpa	YS MPa	% Elongation (L=4d)	CVN Impact (J)	
					-30 °C	-40 °C
Automelt EH14	AW	>510	>420	>24	>50	>30
Automelt EH14	PW	>480	>400	>24	>60	>40
Automelt EA3	AW	>550	>470	>20	>30	--
Automelt EA3	PW	>510	>420	>22	>40	>30

AW - As Welded; PW - After Post Weld Heat Treatment of 620 °C for 1 hour

Typical Applications:

Mainly used for multi-pass welding of boilers and pressure vessels, with steel grades including IS 2002 Gr2B, ASTM A516 Gr. 60/70, etc.

Type of current / polarity: DC (+) - 800A max.

Redrying Conditions: It is advisable to dry the flux at 300-350 °C for 1 Hr prior to use

Packing Data

	Net Wt. Kgs.
Poly lined paper bags (Standard)	30
Steel Drums (on request)	100



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