AS 231

SAW Fluxes

SAW Rutile-Acid Fluxes

AS 231 is an agglomerated rutile type flux for welding general structural steels. It is also used for welding fine-grain steels with a yield strength of up to 355 MPa. Relatively high silicon pick-up is achieved with this flux and when used in conjunction with AS 26, AS 35 wire electrodes manganese pick-up also results. AS 231 is particularly well-suited to twin-wire, tandem and multi-wire welding at high speeds. It can also be used with the two-run technique especially when weld thin-walled spiral tubes. The good slag detachability makes AS 231 a standard for fillet welding. AS 231 can be welded on DC+ or AC at up to 1500 A. Damp flux should be re-dried at 300-350°C.
Standard grain size according to EN-ISO 14174: 2-16.
Special grain sizes 2-12 and 2-20 on demand.

Rutile agglomerated flux suitable for welding normal metal structural work. Can also be used on fine grain steels. Has active manganese and silicon action that makes it suitable for welding in up to three passes. 25 kg plastic bag

Classification		
	EN ISO	14174- SA AR 1 87 AC
AS 26	EN ISO	14171-A- S 42 A AR S1
AS 26	EN ISO	14171-A- S 4T A AR S1
AS 35	EN ISO	14171-A- S 42 0 AR S2
AS 35	EN ISO	14171-A- S 4T 0 AR S2
AS 36	EN ISO	14171-A- S 4T 0 AR S4
AS 48	EN ISO	14171-A- S 46 0 AR S2Ni1Cu
AS 26	AWS	A5.17: F7A0-EL12
AS 35	AWS	A5.17: F7A0-EM12K
AS 36	AWS	A5.17: F7A0-EH14
AS 48	AWS	A 5.23: F8AZ-EG-G
SUBCORED 31HD	AWS	A5.17: F7A4-EC

Approvals	ABS	BV	CRS	DB	DNV	GL	LRS	RINA	TÜV
AS 26									●
AS 35	2T-2YT			●			2T-2YT	2T-2YT	●
AS 36	3Y400 Fillet	A3Y40 Fillet	3Y40 Fillet	●	III Y40 Fillet	3Y40 Fillet	3Y40M H5 Fillet	F42 2 - F52 2 Angelo	●
AS 40									●

Flux Main Components	
Al2O3 + TiO2 + ZrO2	52 %
SiO2	19 %
MnO + FeO	17 %
CaO + CaF2 + MgO	11 %

Boniszewski Basicity 0.4

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SAF-FRO

Chemical analysis (Typical values in %)

		C	Mn	Si	Ni	Mo	Cu
All weld metal	AS 26	0.04	1.1	0.6	-	-	-
All weld metal	AS 35	0.04	1.3	0.6	-	-	-
All weld metal	AS 36	0.04	1.7	0.6	-	-	-
All weld metal	AS 40	0.06	1.7	0.6	-	0.5	-
All weld metal	AS 48	0.04	1.3	0.6	0.7	-	0.4

All-weld metal Mechanical Properties

	Heat Treatment	Yield Strength (N/mm²)	Tensile Strength (N/mm²)	Elongation A5 (%)
AS 26	As Welded	≥ 400	520-650	≥ 22
AS 35	As Welded	≥ 400	520-650	≥ 22
AS 36	As Welded	≥ 400	540-650	≥ 22
AS 40	As Welded	≥ 500	580-690	≥ 20
AS 48	As Welded	≥ 470	550-690	≥ 22

All-weld metal Mechanical Properties - CV

	Heat Treatment	Impact Energy (J)	
		0 °C	-20 °C
AS 26	As Welded		27
AS 35	As Welded		27
AS 36	As Welded	≥ 40	≥ 27
AS 40	As Welded		≥ 40
AS 48	As Welded	30	

Typical applications

	Materials
AS 35	ASME: ASTM A131 Grades A, B, D, DS; A253 all Grades; A529 Grades 42, 50; A570 all Grades; A572 Grades 42, 50; A709 Grades 36, 50 EN: S(P)235-S(P)355; L245-L360
AS 36	ASME: ASTM A131 Grades A, B, D, DS; A253 all Grades; A529 Grades 42, 50; A570 all Grades; A572 Grades 42, 50; A709 Grades 36, 50 EN: S(P)235-S(P)355; L245-L360
AS 26	ASME: ASTM A131 Grades A, B, D, DS; A253 all Grades; A529 Grades 42, 50; A570 all Grades; A572 Grades 42, 50; A709 Grades 36, 50 EN: S(P)235-S(P)355; L245-L360
AS 48	ASME: EN: S235J0W; S235J2W; S355J0W; S355J2W; S355K2W
AS 40	ASME: ASTM A131 Grades A, B, D, DS; A253 all Grades; A529 Grades 42, 50; A570 all Grades; A572 Grades 42, 50; A709 Grades 36, 50 EN: S(P)235-S(P)355; L245-L360

Redrying
300-350°Cx2h

Current Conditions
AC; DC+

Packaging data

Packaging Type	PE
Weight (kg)	25
-	●