UNIFLUX D1

OERLIKON

SAW Rutile-Acid Fluxes
C-Mn and low-alloy steels

Uniflux D1 is an agglomerated aluminate rutile type flux for welding general structural steels, pressure vessel steels as well as fine-grain steels with a yield strength of up to 355 N/mm². The good slag detachability means that Uniflux D1 is commonly used when fillet welding. The weld metal is not susceptible to porosity when welding on workpiece surfaces contaminated by rust, scale, etc.
UNIFLUX D1 can be welded on DC+ or AC at up to 1000 A (with the single-wire process).
Damp flux should be re-dried at 300-350°C. Grain size in accordance with EN 760: 2-16.

Wire	Classification	
OE-S1	AWS	A5.17:F7A0 - EL12
OE-S2	AWS	A5.17:F7A0 - EM12K
	EN	760: SA AR 1 97 AC

Wire	Approvals	Grades

Flux Analysis	
Al2O3 + MnO	55 %
CaF2	5 %
SiO2 + TiO2	30 %

Basicity to Boniszewski 0,4

Typical Applications

Wire	Materials
OE-S1	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
OE-S2	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
OE-S2Mo	ASME: ASTM A355 Gr. P1; A182M Gr. F1 EN:16 Mo 3,
OE-S2CrMo1	ASME: A199 and A200 grade T11, A213 Grades T11, T12 EN:'13CrMo4-5, 13CrMoSi5-5

Analysis of all-weld metal (Typical values in %)

Wire	C	Mn	Si	Cr	Ni	Mo	Nb	N	Cu
OE-S1	0.04	0.90	0.50	-	-	-	-	-	-
OE-S2	0.03	1.20	0.50	-	-	-	-	-	-
OE-S2Mo	0.04	1.20	0.50	-	-	0.50	-	-	-

All-weld metal Mechanical Properties

Wire	Heat Treatment	Yield Strength N/mm^2	Tensile Strength N/mm^2	Elongation A5 (%)
OE-S1	As Welded	≥ 360	450 - 550	≥ 22
OE-S2	As Welded	≥ 400	500 - 600	≥ 22
OE-S2Mo	As Welded	≥ 450	580 - 680	≥ 18

All-weld metal Mechanical Properties - Cv

Wire	Heat Treatment	Charpy V Notch Impact Toughness (J)							
		+20	0	- 20	- 30	- 40	- 60	- 80	- 101
OE-S1	As Welded	30 min	-	-	-	-	-	-	-
OE-S2	As Welded	30 min	-	-	-	-	-	-	-
OE-S2Mo	As Welded	50 min	-	-	-	-	-	-	-

Packaging data

25kg heavy duty sealed polythene sacks

Further forms of delivery on request.

Current condition
DC+; AC