

## SAW Fluxes Stainless and Heat resistant steels

OP F500 is a special agglomerated flux for welding austenitic stainless steels including stabilised compositions. OP F500 is neutral and it is used for welding both single wire and multiwire. Suitable for welding thin plates at high travel speeds. Excellent slag detachability even at high interpass temperatures. Also suitable for surfacing in combination with martensitic stainless steel wires like OE-410 and OE-410NiMo.

Damp flux should be re-dried at 300-350°C.

Grain size according to EN-ISO 14174: 2-16.

Classification	
EN ISO	14174: S A FB 2

	Approvals	Grade
OE-316L	GL	4404
OE-309L	DNV	309L
OE-309L	GL	4332

Flux Main Components	
CaO + CaF <sub>2</sub> + MgO	54 %
Al <sub>2</sub> O <sub>3</sub>	37 %
SiO <sub>2</sub>	7 %

<b>Boniszewski Basicity</b>	2.2
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### Chemical analysis (Typical values in %)

		C	Mn	Si	Cr	Ni	Mo	Nb	Cu	N
All weld metal	OE-410NiMo	0.015	0.3	0.6	12	4.2	0.5	-	-	-
All weld metal	OE-308L	0.02	1.5	0.5	18	9	-	-	≤ 0.35	-
All weld metal	OE-347	0.07	1.5	0.5	18	9	-	1	≤ 0.35	-
All weld metal	OE-316L	0.02	1.5	0.5	18	10	2.5	-	-	-
All weld metal	OE-318	0.07	1.5	0.5	18	10	2.5	-	-	-
All weld metal	OE-S 2209	0.03	1.5	0.5	22	8.5	3	-	-	0.18
All weld metal	OE-309L	0.02	1.5	0.5	22	13	-	-	-	-
All weld metal	OE-309L Mo	0.02	1.5	0.5	20	14	2.5	-	-	-
All weld metal	OE-410	0.06	0.3	0.6	12	-	-	-	-	-

### All-weld metal Mechanical Properties

	Heat Treatment	Yield Strength (MPa)	Tensile Strength (MPa)	Elongation A5 (%)
OE-308L	As Welded	≥ 350	≥ 500	≥ 35
OE-347	As Welded	≥ 500	≥ 570	≥ 30
OE-316L	As Welded	≥ 350	≥ 520	≥ 30
OE-318	As Welded	≥ 390	≥ 600	≥ 30
OE-S 2209	As Welded	≥ 600	≥ 700	≥ 30
OE-309L	As Welded	≥ 400	≥ 550	≥ 30
OE-309L Mo	As Welded	≥ 370	≥ 550	≥ 25

### All-weld metal Mechanical Properties - CV

	Heat Treatment	Impact Energy (J)	
		+20 °C	-60 °C
OE-308L	As Welded	≥ 75	
OE-347	As Welded		≥ 70
OE-316L	As Welded	≥ 75	
OE-318	As Welded		≥ 100
OE-S 22 09	As Welded	≥ 50	
OE-309L	As Welded	≥ 70	≥ 70
OE-309LMo	As Welded	≥ 65	

### Typical applications

	Materials
OE-308L	ASME: AISI 304 - 304L - 302 EN: X5CrNi18-8 (1.4301), X2CrNi18-8 (1.4300)
OE-347	ASME: ASTM A336 Grades F321, F347 EN: X10CrNiTi18-9 (1.4541), X12CrNiTi18-9 (1.4870), X10CrNiNb18-9 (1.4550), X5CrNiNb (1.4543)
OE-316L	ASME: ASTM A351 Grades CF3M, CF3MA EN: X2CrNiMo18-10 (1.4404), X2CrNiMo18-12 (1.4435), X5CrNiMo18-10 (1.4401)
OE-318	ASME: AISI 318L EN: X10CrNiMoNb18-10 (1.4580), X10CrNiMoTi18-12 (1.4573), X10CrNiMoNb18-12 (1.4583)
OE-S 22 09	ASME: A182 Grade F51, UNS S31803 - S31500 - S31200 - S32304 EN: X2CrNiMoN22-5-8 (1.4462)
OE-309LMo	First layer on Carbon-Manganese steels and low alloy steels for 316L overlay

#### Redrying

300-350°Cx2-4h

#### Current Conditions

AC; DC+

### Packaging data

Packaging Type	PE
Weight (kg)	25
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