

## SAW Fluxes SAW Basic and Semi-basic Fluxes

OP 132 is an aluminate-basic type flux designed for welding pipes from both sides in one pass. OP 132 is characterised by its excellent current carrying capacity of more than 1500A on the lead wire in multi-wire welding processes. Even at very high local currents the welding process remains stable. The weld seam shows very good wetting, a regular flow and a very broad, flat profile. OP 132 contains specific components which decompose during welding and create protective gases. This gas protection prohibits the access of atmospheric nitrogen to the weld pool and thus guarantees optimum toughness particularly with OE-TIBOR 25 and OE-TIBOR 33 wire when welding from both sides in one pass. OP 132 can also be used in multi-run applications with OE-S2 and NiMo alloyed wires.

OP 132 is suitable for applications in sour gas service.

Grain size according to EN-ISO 14174: 2-20.

Classification		
	EN ISO	14174: SA AB 1 67 AC H5
OE-S2 Mo	AWS	A5.23: F7P5-EA2-A2
OE-S2 Mo	AWS	A5.23: F8A5-EA2-A2
OE-S2 Mo	AWS	A5.23: F8TA4G-EA2
OE-SD3 1Ni 1/2Mo	AWS	A5.23: F8TA4G-EF3
OE-SD3 1Ni 1/2Mo	AWS	A5.23: F9A6-EF3/EG-F3
OE-SD3 1Ni 1/2Mo	AWS	A5.23: F9P5-EF3/EG-F3
OE-TIBOR 25	AWS	A5.23: F8TA6G-EG
OE-TIBOR 33	AWS	A5.23: F9TA6G-EG
OE-S2	AWS	A5.17: F7A5-EM12K
OE-SD3	AWS	A5.17: F7A5-EH12K

Flux Main Components	
Al <sub>2</sub> O <sub>3</sub> + MnO	35 %
CaO + MgO	25 %
SiO <sub>2</sub> + TiO <sub>2</sub>	20 %
CaF <sub>2</sub>	15 %

Approvals		Grade
OE-S2 Mo	DB	●
OE-S2 Mo	GL	3Y42T, 4Y42M H5
OE-S2 Mo	LRS	3Y42T, 4Y42M
OE-S2 Mo	TÜV	●
OE-S2	DB	●
OE-S2	TÜV	●

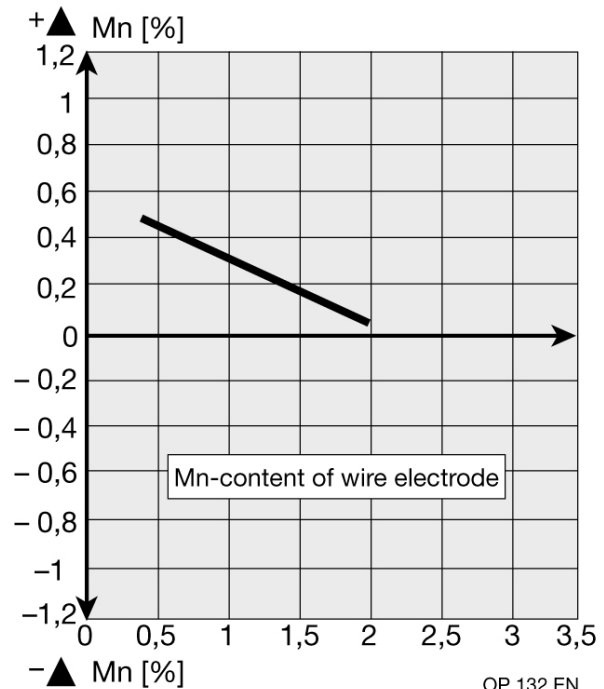
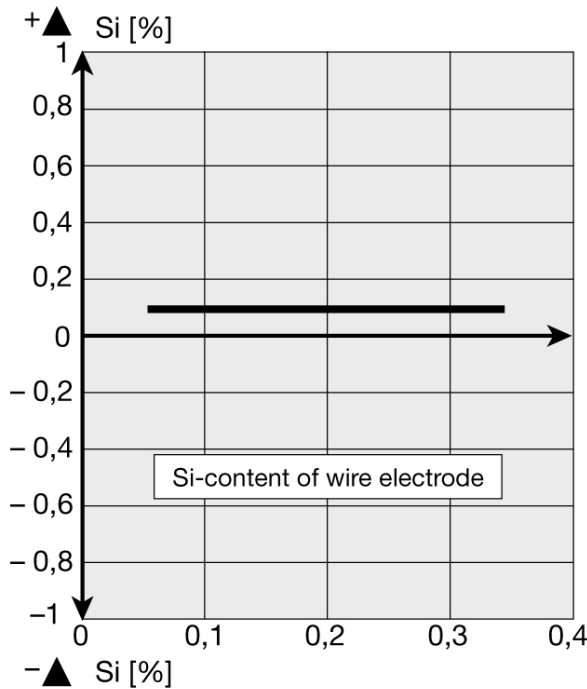
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**Boniszewski Basicity** 1.5

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### METALLURGICAL BEHAVIOUR

Pick-up and burn-out of the alloying elements Si and Mn = f (alloy content of wire electrode)  
DVS-Merkblatt 0907 Part 1



OP 132 EN

#### Chemical analysis (Typical values in %)

		C	Mn	Si	Ni	Mo
All weld metal	OE-S2 Mo	0.07	1.3	0.2	-	0.5
All weld metal	OE-SD3 1Ni 1/2Mo	0.07	1.7	0.3	0.9	0.5
All weld metal	OE-S2	0.07	1.3	0.2	-	-
All weld metal	OE-SD3	0.07	1.8	0.4	-	-

#### All-weld metal Mechanical Properties

	Heat Treatment	Yield Strength (MPa)	Tensile Strength (MPa)	Elongation A5 (%)
OE-S2 Mo	As Welded	≥ 470	550-620	≥ 21
OE-SD3 1Ni 1/2Mo	620°Cx1hr	≥ 550	620-760	≥ 21
OE-SD3 1Ni 1/2Mo	As Welded	≥ 550	620-760	≥ 21
OE-S2	As Welded	≥ 400	480-510	≥ 27
OE-SD3	As Welded	≥ 470	530-580	≥ 25

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### All-weld metal Mechanical Properties - CV

	Heat Treatment	Impact Energy (J)			
		-20 °C	-30 °C	-40 °C	-50 °C
OE-S2 Mo	As Welded	≥ 110		≥ 80	≥ 47
OE-SD3 1Ni 1/2Mo	620°Cx1hr			≥ 47	
OE-SD3 1Ni 1/2Mo	As Welded				≥ 47
OE-S2	As Welded	≥ 140	≥ 100	≥ 60	
OE-SD3	As Welded			≥ 70	≥ 47

### Typical applications

	Materials
OE-TIBOR 33	ASME: X60, X65, X70, X80 EN: S(P)355-S(P)460, L245-L450
OE-S2 Mo	ASME: X60, X65 EN: 16Mo3, S(P)355-S(P)460, L245-L450
OE-SD3 1Ni 1/2Mo	ASME: X65, X70, X80 EN: L450-L480-L550
OE-TIBOR 25	ASME: X60, X65, X70 EN: S(P)355-S(P)460, L245-L450
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-SD3	ASME: EN S(P)235-S(P)420

#### Redrying

300-350°Cx2-4h

#### Current Conditions

AC; DC+

### Packaging data

Packaging Type	PE	DRYBAG
Weight (kg)	25	25
-	●	●