GWELD
SEAL OF TRUST

GEEFLUX 303

IDENTIFICATION
GEEFLUX 303

CLASSIFICATION
AWS/SFA 5.9 : ER 308L; AWS/SFA 5.9 : ER 316L;
AWS/SFA 5.9 : ER 309L; AWS/SFA 5.9 : ER 309LMo;
AWS/SFA 5.9 : ER 385; AWS/SF A 5.9 : ER 2209

DESCRIPTION
Specially designed for welding Austenitic and Austenitic-Ferritic stainless steels. This basic, but neutral flux will produce outstanding results in the welding of the standard Austenitic and heat-resisting stainless steels, when using the corresponding wire electrodes according to EN ISO 14343 or ASME II C: SFA-5.9. Due to the basic flux characteristics of Geeflux 303 most grades of the 300-stainless steels can be welded using single or multiple wire submerged-arc processes. It is also suited for joint-and overlay welding of nickel alloys, together with adequate Ni-base wire electrodes. Geeflux 303 produces smooth flat weld beads when fillet welding. If appropriate welding parameters are applied a finely ribbed surface along with self-releasing slag is yielded as well as weld beads that are free of slag inclusions. The metallurgical behaviour of the flux is neutral (C-neutral, low Si pick-up and low Mn burn-out) without Cr- or other alloy compensation.

CHEMICAL COMPOSITION OF THE WIRE (AS PER AWS/SFA 5.9)

Wire	C	Mn	Si	S	P	Cr	Ni	Mo	Cu	Nb	N	w
ER 307	0.04 - 0.14	3.30 - 4.75	0.30 - 0.65	0.03 max	0.03 max	19.5 - 22.0	8.0 - 10.7	0.5 - 1.50	0.75 max	-	-	-
ER 308L	0.03 max	1.0 - 2.50	0.30 - 0.65	0.03 max	0.03 max	19.5 - 22.0	9.0 - 11.0	0.75 max	0.75 max	-	-	-
ER 309L	0.03 max	1.0 - 2.50	0.30 - 0.65	0.03 max	0.03 max	23.0 - 25.0	12.0 - 14.0	0.75 max	0.75 max	-	-	-
ER 309LMo	0.03 max	1.0 - 2.50	0.30 - 0.65	0.03 max	0.03 max	23.0 - 25.0	12.0 - 14.0	2.0 - 3.0	0.75 max	-	-	-
ER 310	0.08 - 0.15	1.0 - 2.50	0.30 - 0.65	0.03 max	0.03 max	25.0 - 28.0	20.0 - 22.5	0.75 max	0.75 max	-	-	-
ER 316L	0.03 max	1.0 - 2.50	0.30 - 0.65	0.03 max	0.03 max	18.0 - 20.0	11.0 - 14.0	2.0 - 3.0	0.75 max	-	-	-
ER 318	0.08 max	1.0 - 2.50	0.30-0.65	0.03 max	0.03 max	18.0 - 20.0	11.0-14.0	2.0 - 3.0	0.75 max	8 x C min / 1.0 max	-	-
ER 347	0.08 max	1.0 - 2.50	0.30 - 0.65	0.03 max	0.03 max	19.0 - 21.50	9.0 - 11.0	0.75 max	0.75 max	10 x C min / 1.0 max	-	-
ER 385	0.025 max	1.0 - 2.50	0.5 max	0.03 max	0.02 max	19.5 - 21.50	24.0 - 26.0	4.2 - 5.2	1.2 - 2.0	-	-	-
ER 410NiMo	0.06 max	0.6 max	0.5 max	0.03 max	0.03 max	11.0 - 12.5	4.0 - 5.0	0.4 - 0.7	0.75 max	-	-	-
ER 2209	0.03 max	0.50 - 2.00	0.9 max	0.03 max	0.03 max	21.5-23.5	7.5 - 9.5	2.5 - 3.5	0.75 max	-	0.08 - 0.20	-
ER 25.9.4	0.03 max	2.5 max	1 max	0.02 max	0.03 max	24.0 - 27.0	8.0 - 10.5	2.5 - 4.5	1.5 max	-	0.20 - 0.30	0.02 max

MECHANICAL PROPERTIES OF THE WELD METAL (RANGE) IN AS-WELDED CONDITION

Wire	UTS (MPa)	EL (%) (L=4D)	CVN Impact Value	
			Temp	Joules
ER 307	610 min	35 min	-	-
ER 308L	560 - 670	36 - 45	19.6°C	45 min

ER 309L	560 - 760	36 - 45	0°C	50 - 70
ER 309LMo	560 min	36 - 45	0°C	45 min
ER 310	550 min	30 min	0°C	70 min
ER 316L	560 min	36 min	0°C	70 - 95
ER 318	560 - 670	36 - 45	0°C	50 - 70
ER 347	560 - 670	36 - 45	0°C	70 - 95
ER 385	560 min	30 min	-	-
ER 410NiMo	760 min	15 min	-	-
ER 2209	700 min	20 min	+20°C	50 min
ER 25.9.4L	700 - 880	18 - 35	-50°C	60 - 100

STORAGE AND DEDRYING

Unopened originally packed flux bags can be stored upto one year in dry storage rooms after date of delivery ex-factory. Redrying conditions specific to the flux : 200 + 50°C effective flux temperature.

***) DIFFUSIBLE HYDROGEN CONTENT H5**

Determined in deposited metal acc. to be method described in ISO 3690 type of current DC; redrying conditions 200 + 50°C.

CHEMICAL COMPOSITION (CONSTITUENTS)

$SiO_2 + TiO_2$	$Al_2O_3 + Mo$	$CaO + MgO$	CaF_2
10%	35%	5%	50%
Bascity according to Boniszewski : ~ 1.9			

FLUX DENSITY **:** 1.0 Kg/dm3(l)

GRAIN SIZE **:** 2 - 16

CURRENT CONDITION **:** Upto 900 A DC using one wire.

PACKING PARAMETERS : 25 Kg PE-coated