

2507XKS

MMA (SMAW)

BASIC PIPE-WELDING MMA ELECTRODE FOR SUPERDUPLEX STEELS

PRODUCT DESCRIPTION

Basic coated all-positional MMA electrode for welding superduplex alloys for service in the as-welded condition. This electrode is overmatching with respect to nickel content to achieve correct austenite-ferrite microstructural phase balance. It is designed for the most demanding vertical and overhead welding positions such as fixed pipework qualified in the ASME 5G/6G position, and for applications requiring the highest toughness.

Recovery is about 105% with respect to core wire, 65% with respect to the whole electrode.

CLASSIFICATIONS

AWS A5.4M	E2594-15
ISO 3581	E 25 9 4 N L B 4 2

ASME IX QUALIFICATION

QW432	F-No 5
QW442	A-No --

WELDING POSITIONS (ISO/ASME)



PA/1G



PB/2F



PC/2G



PF/3Gu



PE/4G

CHEMICAL COMPOSITION (WELD METAL WT %)

	C	Mn	Si	S	P	Cr	Ni	Mo	Cu	N	PRE _N
min.	--	0.5	--	--	--	24.0	8.5	3.5	--	0.20	40
max.	0.04	2.0	1.0	0.02	0.03	26.0	10.5	4.5	0.5	0.30	46
Typical	0.03	1	0.5	0.01	0.02	25	9.5	3.8	0.1	0.22	42

ALL-WELD MECHANICAL PROPERTIES

As welded	Min.	Typical	>1120°C/3h + WQ transverse *
Tensile strength (MPa)	800	870	>760
0.2% proof strength (MPa)	550	700	--
Elongation (%) 4d	22	28	--
5d	18	25	--
Reduction of area %	--	45	--
Impact ISO-V(I) +20°C	--	85	--
-50°C	--	60	>80
-75°C	--	35	--
Hardness (HV)	--	280-330	<300

* Representative properties for solution treated welds in castings of ASTM A890 grade 5A. Ferrite >30%.

OPERATING PARAMETERS, DC +VE

Diameter (mm)	2.5	3.2	4.0	5.0
min. A	50	70	100	130
max. A	75	95	155	190

PACKAGING DATA

	Diameter (mm)	Length (mm)	Item number	No of pieces		Weight (kg)	
				can	box	can	box
METAL CAN	2.5	300	2507XKS-25	223	669	3.8	11.4
	3.2	350	2507XKS-32	128	384	4.3	12.9
	4.0	350	2507XKS-40	84	252	4.3	12.9
	5.0	350	2507XKS-50	52	156	4.2	12.6

Redrying : 200 – 300°C/1-2h to restore to as-packed condition. Maximum 400° C, 3 cycles, 10h total.

FUME DATA (WT % TYPICAL)

Fe	Mn	Ni	Cr	Cu	Mo	V	F *	OES (mg/m ³)
7	6	1	7	0.5	0.2	<0.1	16	0.7

* F = 28% for basic coated 2507XKS electrode but this does not affect the OES.

All information in this data sheet is accurate to the best of our knowledge at the time of printing. Please refer to www.specialalloys.eu for any updated information.