

ZERON® 100XKS

MMA (SMAW)

BASIC PIPE-WELDING MMA ELECTRODE FOR SUPERDUPLEX STEELS

PRODUCT DESCRIPTION

Basic coated all-positional MMA electrode for welding Zeron® 100 and other 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 6G position.

Fully alloyed matching Zeron® 100 core wire including W and Cu. Moisture resistant flux technology.

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

CLASSIFICATIONS

AWS A5.4M	E2595-15
ISO 3581	E 25 9 4 N L B 4 2
Weir Materials	MDS 12809/08
Approvals	ABS, DNV

ASME IX QUALIFICATION

QW432	F-No 5
QW442	A-No 8

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	W	Cu	N	PRE _N	PRE _W
min.	--	--	--	--	--	24.0	9.0	3.5	0.5	0.5	0.2	40	40
max.	0.03	1.0	1.0	0.01	0.03	26.0	10.0	4.0	1.0	1.0	0.3	45	45
Typical	0.025	0.9	0.5	0.005	0.02	25	9.3	3.6	0.7	0.7	0.23	42	43

Pitting resistance equivalent PREN = Cr + 3.3Mo + 16N

Pitting resistance equivalent PREW = Cr + 3.3Mo + 1.65W + 16N

ALL-WELD MECHANICAL PROPERTIES

As welded	Min.	Typical
Tensile strength [MPa]	760	800-950
0.2% proof strength [MPa]	550	650-750
Elongation [%] 4d	15	30
5d	20	22-27
Reduction of area %	--	40-45
Impact ISO-V(I) - 20°C	--	> 55
- 50°C	--	> 40
Hardness [HV]	--	270-320

OPERATING PARAMETERS, DC +VE

Diameter (mm)	2.5	3.2	4.0	5.0
min. A	50	65	90	120
max. A	70	100	140	180

PACKAGING DATA

	Diameter (mm)	Length (mm)	Item number	No of pieces		Weight (kg)	
				can	box	can	box
METAL CAN	2.5	300	Z100XKS-25	216	648	3.7	11.1
	3.2	350	Z100XKS-32	122	366	4.1	12.3
	4.0	350	Z100XKS-40	88	264	4.4	13.2
	5.0	350	Z100XKS-50	52	156	4.2	12.6

Redrying : 200 – 300°C/1-2h to restore to as-packed condition. Maximum 380° C, 3 cycles, 10h total.

FUME DATA (WT % TYPICAL)

Fe	Mn	Ni	Cr	Cu	Mo	V	F	OES (mg/m³)
7	6	1	7	0.5	0.2	<0.1	28	0.7

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.