SUPERMET 2506Cu

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	--	--
Typical	0.025	0.9	0.5	0.005	0.02	25	9.3	3.6	0.7	0.7	0.23	41	42

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(J)	- 20°C	--	> 55
	- 50°C	--	> 40
Hardness (HV)		--	270-320

OPERATING PARAMETERS, DC +VE

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

PACKAGING DATA

	Diameter (mm)	Length (mm)	Item number	No of pieces		Weight (kg)	
				can	box	can	box
METAL CAN	2.5	300	SM2506CU-25	CONSULT US			
	3.2	350	SM2506CU-32				
	4.0	350	SM2506CU-40				

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