ULTRAMET 2205 (Arosta 4462)

MMA (SMAW)

OVERALLOYED RUTILE ELECTRODE FOR 22%Cr DUPLEX STEELS

PRODUCT DESCRIPTION

MMA electrode made on duplex stainless steel core wire with a rutile flux system designed to give minimum carbon content coupled with optimum operating characteristics. The electrode has a rutile flux system optimised for all welding positions except vertical down and provides excellent operability.
Recovery is about 120% with respect to core wire, 65% with respect to whole electrode..

CLASSIFICATIONS

AWS A5.4M	E2209-16* (nearest classification)
ISO 3581	E 22 9 3 N L R 32

ASME IX QUALIFICATION

QW432	F-No --
QW442	A-No 8

WELDING POSITIONS (ISO/ASME)

PA/1G PB/2F PC/2G

CHEMICAL COMPOSITION (WELD METAL WT %)

	C	Mn	Si	S	P	Cr	Ni	Mo	Cu	N	PRE_N
Min.	--	0.5	0.3	--	--	24.0	8.5	3.0	--	0.14	36
Max.	0.03	2.0	1.0	0.02	0.03	26.0	10.0	4.0	0.5	0.25	43
Typical	0.02	1	0.7	0.01	0.02	25	9.5	3.4	0.1	0.17	38

PRE_N = Cr + 3.3Mo + 16N

ALL-WELD MECHANICAL PROPERTIES

As welded	Min.	Typical	Pipe butt weld	1120°C/ 3h + WQ
Tensile strength (MPa)	690	850	867	800
0.2% proof strength (MPa)	480	650	752	480
Elongation (%) 4d	20	30	25	32
Reduction of area %	--	40	35	--
Impact ISO*-V(J) +20°C	--	60-73	--	--
- 20°C	--	45-55	45-50	--
- 30°C	--	40-52	42-46	> 90
- 40°C	--	35-47	38-43	> 70
- 50°C	--	30-40	35-40	> 35

OPERATING PARAMETERS, DC +VE OR AC (OCV: 55V MIN)

Diameter (mm)	2.5	3.2	4.0
min. A	50	65	100
max. A	90	120	160

PACKAGING DATA

	Diameter (mm)	Length (mm)	Item number	No of pieces		Weight (kg)	
				Pack	carton	Pack	carton
METAL CAN	2.5	300	UM2205-25-1	197	591	4.0	12.0
	3.2	350	UM2205-32-1	120	360	4.2	12.6
	4.0	350	UM2205-40-1	83	249	4.3	12.9
SRP	2.5	350	UM2205SP-25-1	65	650	1.3	13.0
	3.2	350	UM2205SP-32-1	51	408	1.8	14.4
	4.0	350	UM2205SP-40-1	30	300	1.5	15.0
	5.0	350	UM2205SP-50-1	21	138	1.7	13.6

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	Cr	Ni	Mo	Cu	F *	OES (mg/m³)
7	6	6	1	0.2	<0.2	16	0.8

* F = 28% for basic coated 2205XKS but this does not affect 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 udpated information.