

ULTRAMET 316H

MMA (SMAW)

RUTILE MMA ELECTRODE FOR 316H STAINLESS STEEL

PRODUCT DESCRIPTION

Rutile coated electrode made on high purity 304 core wire, previously called Metrode E316H-16. The higher alloy content compared to 178.2.RCF does increase the risk of intermetallic formation during service at elevated temperatures (500-800°C).

CLASSIFICATIONS

AWS A5.4M	E316H-16
ISO 3581	E 19 12 2 R 3 2

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	Cu	FN
Min.	0.04	0.5	--	--	--	17.0	11.0	2.0	--	3
Max.	0.08	2.0	0.90	0.025	0.030	20.0	13.0	3.0	0.5	8
Typical	0.05	1	0.6	0.01	0.02	18	12	2.2	0.1	5

ALL-WELD MECHANICAL PROPERTIES

As-welded	Room Temperature		High Temperature		
	Min.	Typical	650°C	732°C	815°C
Tensile strength (MPa)	550	570	352	268	197
0.2% proof strength (MPa)	350	450	264	204	152
Elongation (%) 4d	30	35	--	--	--
5d	25	33	32	43	54
Reduction of area (%)	--	50	58	53	60
Impact energy +20°C	--	70	--	--	--
Hardness (HV)	--	210	--	--	--

TYPICAL OPERATING PARAMETERS, DC +VE

Diameter (mm)	3.2
min. A	75
max. A	120

PACKAGING DATA

	Diameter (mm)	Length (mm)	Item number	No of pieces		Weight (kg)	
				can	carton	can	carton
METAL CAN	2.5	300	UM316H-25	-	-	3.8	11.4
	3.2	350	UM316H-32	123	369	4.5	13.5
	4.0	350	UM316H-40	To be defined	-	4.5	13.5

Redrying: 150 – 200°C/1-2h to restore to as-packed condition. Maximum 250° C, 3 cycles, 10h total

FUME DATA (WT % TYPICAL)

Fe	Mn	Ni	Cr	Mo	Cu	F	OES (mg/m³)
8	5	0.7	5	0.1	< 0.2	16	1

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.