

Outershield® MC715-H

CLASSIFICATION

AWS A5.18/A5.18M	: E70C-6M H4
EN ISO 17632-A	: T 46 4 M M 2 H5

GENERAL DESCRIPTION

Metal cored gas shielded wire for all positions

Few silicates and virtually no spatter, fast travel speed, excellent wire feeding

Excellent arc characteristics give outstanding operator appeal

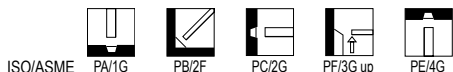
Excellent mechanical properties (CNV >47J at -40°C)

Very low hydrogen (H_{DM} <5 ml/100g)

Superior product consistency with optimal alloy control

Depending on application good alternative for basic flux cored wires

WELDING POSITIONS



CURRENT TYPE

DC +	
M21	: Mixed gas Ar+ (>15-25%) CO ₂
Amount	: 15-25 l/min

APPROVALS

Shielding gas	BV	DB	DNV	GL	RINA
M21	SA3,3YMHH	+	IV Y40H5	4Y40H5S	4YSH5

CHEMICAL COMPOSITION (W%), TYPICAL, ALL WELD METAL

Shielding gas	C	Mn	Si	P	S	H_{DM} ml/100 g
M21	0.04	1.5	0.4	0.012	0.020	3

MECHANICAL PROPERTIES, TYPICAL, ALL WELD METAL

	Shielding gas	Condition	Yield strength (N/mm ²)	Tensile strength (N/mm ²)	Elongation (%)	Impact ISO-V(J)	
						-30°C	-40°C
Required: AWS A5.18			min. 400	min. 480	min. 22		
EN ISO 17632-A			min. 460	530-680	min. 20		min. 47
Typical values	M21	AW	510	580	27	100	80
	M21	SR	430	485	30		

SR : 2h/640°C

PACKAGING AND AVAILABLE SIZES

Diameter (mm)	1.2	1.4	1.6
Unit : 4.5 kg plastic spool S200	X		
14 kg spool S300 (alu. Bag)	X		
15 kg spool B300	X	X	X
25 kg wire reel B435			X
200 kg Accutrak® Drum	X	X	X

Outershield® MC715-H: rev. EN 23

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MATERIALS TO BE WELDED

Steel grades/Standard	Type
General structural steel	
EN 10025 part 2	S185, S235, S275, S355
Ship plates	
ASTM A131	Grade A, B, D, AH32 to EH40
Cast steel	
EN 10213-2	G P 240R
Pipe material	
EN 10208-1	L210, L240, L290, L360
EN 10208-2	L240NB, L290NB, L360NB, L360QB, L240MB,
L290MB, L360MB, L415MB, L415NB, L445	
API 5LX	X42, X46, X52, X60, X65
EN 10216-1/	P235T1, P235T2, P275T1
EN 10217-1	P275T2, P355N
Boiler & pressure vessel steel	
EN 10028-2	P235GH, P265GH, P295GH, P355GH
Fine grained steel	
EN 10025 part 3	S275N, S275NL, S355N, S355NL, S420N, S420NL, S460N, S460NL
EN 10025 part 4	S275M, S275ML, S355M, S355ML, S420M, S420ML, S460ML

CALCULATION DATA

Diameter (mm)	Arc mode	Electrical stick-out (mm)	Wire Feed		Current (A)	Arc Voltage (V)	Deposition rate (kg/h)	kg wire/kg weldmetal
			Speed (cm/min)					
1.2	Short arc	15	230	100	15	1.1	1.10	
			320	120	16	1.4	1.10	
1.2	Spray arc	20	400	150	17	1.9	1.10	
			635	180	28-30	2.7	1.10	
			940	275	31-34	4.8	1.10	
1.4	Short arc	15	1420	340	35-38	6.8	1.10	
			205	105	14.5	1.2	1.10	
1.4	Spray arc	20	255	125	15.0	1.5	1.10	
			280	135	15.5	1.6	1.10	
			445	170	27-29	2.5	1.10	
1.6	Short arc	18	890	270	29-32	5.0	1.10	
			1400	355	32-34	8.1	1.10	
1.6	Spray arc	25	180	145	15	1.5	1.10	
			205	160	16	1.7	1.10	
			230	170	18	1.9	1.10	
			380	235	25-26	2.9	1.10	
			635	325	29-32	5.0	1.10	
			890	400	34-37	7.0	1.10	
			1145	460	36-38	9.1	1.10	

WELDING PARAMETERS, OPTIMUM FILL PASSES IN SHIELDING GAS Ar + (>15-25%) CO₂

Diameter (mm)	Welding positions				
	PA/1G	PB/2F	PC/2G	PF/3Gup	PE/4G
1.2	230-380A	230-380A	230-300A	130-170A	140-175A
	26-36V	26-36V	26-30V	15-17V	16-17V
1.4	240-385A	240-385A	240-340A	160-180A	175-185A
	26-36V	26-36V	26-31V	14-15V	15-16V
1.6	280-460A	280-460A	270-300A		
	28-36V	28-36V	28-30V		