Outershield® MC460VD-H

Mild steel metal cored wire

Classification

AWS A5.18/A5.18M : E70C-6M H4
EN 758 : T 46 2 M M 1 H5

General description

Metal cored wire for welding with high efficiency
Especially for vertical down welding in thin plate
Excellent arc characteristics give outstanding operator appeal
No slag, only some silicate islands, very good wire feeding
High resistance to porosity on primed plate
Superior product consistency with optimal alloy control
Very low hydrogen (H_{DM} <5 ml/100g)

Welding positions

ISO/ASME PA/1G PB/2F PC/2G PF/3G up PG/3G down PE/4G

Current type/Shielding gas

DC- for all welding positions
Ar+ (>5-25)% CO_2 (EN 439: M21)
15-25 l/min

Approvals

Shielding gas	ABS	BV	DNV	GL	LR
M21	3YSA,H5	SA3YMHHH	IIIYMSH5	3YH5S	3S,3YSH5

Chemical composition (w%). typical. all weld metal

Shielding gas	C	Mn	Si	P	S	H_{DM} ml/100g
M21	0.05	1.25	0.6	0.015	0.015	3

Mechanical properties, all weld metal

	Shielding gas	Condition	Yield strength (N/mm^2)	Tensile strength (N/mm^2)	Elongation (%)	Impact ISO-V (J) -20°C	Impact ISO-V (J) -29°C
Required: AWS A5.18			min. 400	min. 480	min. 22		min. 27
EN 758			min. 460	530-680	min. 20	min. 47	
Typical values	M21	AW	510	600	25	90	60

Packaging and available sizes

Unit type	Net weight/unit (kg)	Diameter (mm) 1.2
Plastic spool S200	4.5	X
Wire reel B300	15	X

FCAW

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Materials to be welded

Steel	Code	Type
General structural steel	EN 10025	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
	API 5LX	X42, X46, X52, X60
	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 10113-2	S275, S275, S355, S420
	EN 10113-3	S275M, S275ML, S355M, S355ML, S420M, S420ML

Calculation data

Diameter (mm)	Electrical Stick-out (mm)	Wire feed speed (cm/min)	Current (A)	Arc Voltage (V)	Deposition Rate (kg/h)	kg Wire/ kg weld metal
1.2	20	635	180	28-30	2.7	1.10
		940	275	31-34	4.8	1.10
		1420	340	35-38	6.8	1.10

Welding parameters, optimum fill, shielding gas Ar + (>5 - 25)% CO_2

Diameter (mm)	Current/ Voltage	Welding position PB/2F	PG/3F down	PG/3G down	PE/4F
1.2	(A)	250 - 300	250 - 300	200-220	200-220
	(V)	26-30	26-30	21-24	23-25