

Outershield® MC460VD-H

CLASSIFICATION

AWS A5.18	E70C-6M H4	A-Nr	10
EN ISO 17632-A	T 46 2 M M 1 H5	F-Nr	6
		9606 FM	1

GENERAL DESCRIPTION

Metal cored wire for fillet 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

WELDING POSITIONS (ISO/ASME)



CURRENT TYPE / SHIELDING GAS (ISO 14175)

DC -
M21 : Mixed gas Ar+ (>15-25%) CO₂
Flow rate : 15-25 l/min

APPROVALS

Shielding gas	ABS	BV	DNV	GL	LR
M21	3YSA,H5	SA3YMH1H	IIYMSH5	3YH5S	3S,3YSH5

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

Shielding gas	C	Mn	Si	P	S	HDM
M21	0.05	1.25	0.6	0.015	0.015	3 ml/100 g

MECHANICAL PROPERTIES, TYPICAL, ALL WELD METAL

	Shielding gas	Condition	Yield strength [N/mm ²]	Tensile strength [N/mm ²]	Elongation [%]	Impact ISO-V(J)	
						-20°C	-29°C
Required: AWS A5.18			min. 400	min. 480	min. 22		min. 27
EN ISO 17632-A			min. 460	530-680	min. 20	min. 47	
Typical values	M21	AW	510	600	25	90	60

PACKAGING AND AVAILABLE SIZES

Diameter (mm)	1.2
16 kg spool B300	X

Outershield® MC460VD-H: rev. C-EN26-01/12/16

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EXAMPLES OF MATERIALS TO BE WELDED

Steel grades/Standard	Type
General structural steels	
EN 10025 part 2	S185, S235, S275, S355
Ship plates	
ASTM A131	Grade A, B, D, AH32 to EH40
Cast steels	
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
EN 10216-1/	P235T1, P235T2, P275T1
EN 10217-1	P275T2, P355N
Boiler & pressure vessel steels	
EN 10028-2	P235GH, P265GH, P295GH, P355GH
Fine grained steels	
EN 10025 part 3	S275N, S355N, S420N
EN 10025 part 4	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 weldmetal
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 PASSES IN SHIELDING GAS Ar + (>15-25)% CO₂

Diameter (mm)	Welding positions			
	PB/2F	PC/2G	PF/3Gup	PE/4G
1.2	250-300A	250-300A	200-220A	200-220A
	26-30V	26-30V	21-24V	23-25V