

# Pipelin<sup>®</sup>er G60M-E

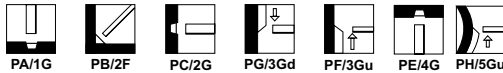
## CLASSIFICATION

AWS A5.20	E71T1-1M-JH4	A-Nr	Mat-Nr
AWS A5.36	E71T-1M21A4-CS1-JH4	F-Nr	
EN ISO 17632-A	T 46 4 P M 1 H5	9606 FM	

## GENERAL DESCRIPTION

Flux cored wire for mechanized and semiautomatic welding with increased deposition rate (kg/h)  
 Perfect bead profile for fill and cap passes, easy to remove reduces cleaning time and improves operating factor  
 Concentrated and deeply penetrating arc helps to achieve defect free welds  
 Focused and clearly visible arc column offers easier welding and reduces operator training time  
 Stable mechanical properties over wide range of heat input, CVN > 47J at -40°C  
 Very low hydrogen (HDM <4 ml/100g) and long term resistance against moisture pick-up

## WELDING POSITIONS (ISO/ASME)



## CURRENT TYPE

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

## APPROVALS

Shielding gas	ABS
M21	+

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

Shielding gas	C	Mn	Si	Ni	P	S	HDM
M21	0.04	1.35	0.25	0.45	0.013	0.008	3ml/100g

## MECHANICAL PROPERTIES, TYPICAL, ALL WELD METAL

	Shielding gas	Condition	Yield strength (N/mm <sup>2</sup> )	Tensile strength (N/mm <sup>2</sup> )	Elongation (%)	Impact ISO-V(J)		
						-20°C	-30°C	-40°C
Required: AWS A5.20 ISO 17632-A			min. 400 min. 460	min. 480 530-680	min. 22 min. 20			min. 47
Typical values	M21	AW	485	540	23	135	120	85

## PACKAGING AND AVAILABLE SIZES

Diameter (mm)	1.2
5.0 kg plastic spool S200	X
16 Kg spool B300	X
16 Kg spool S300 Al bag	X

Pipelin<sup>®</sup>er G60ME: rev. C-EN05-24/04/18

# Pipeliner® G60M-E

## EXAMPLES OF MATERIALS TO BE WELDED

Steel grades/Standard	Type
<b>General structural steels</b>	
EN10027-1	S235 - S460; J2, K2, N and NL, M and ML
<b>Ship plates</b>	
ASTM, ABS, DNV	Grade A, D, EH32 to 40; NV A,D,E 32-40; NV A,D,E 420-460
<b>Pipe material</b>	
ISO 3183	L245-L415N, L245-L450Q, L245M - L450M
API 5LX	X42, X46, X52, X60, X65
<b>Boiler &amp; pressure vessel steels</b>	
EN 10028-3	P235-460, N, NH, NL
EN 10028-2	P235-355GH
<b>Fine grained steels</b>	
EN 10025-2, -3, -4	S235, S275; S355, S420, S420, S460, S460, S460, S460 N, NL, M, ML
EN 10025	S355G, S420G grades
EN 10025-2, -3, -4	S235, S275; S355, S420, S420, S460, S460, S460, S460 N, NL, M, ML
EN 10025 -6	S460Q, QL

## 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	445	120	21-23	1.75	1.13
		700	160	22-24	2.54	1.13
		955	200	25-27	3.45	1.13
		1270	240	27-29	4.73	1.13
		1590	270	30-32	6.2	1.13

## WELDING PARAMETERS, OPTIMUM FILL AND CAP PASSES IN SHIELDING GAS AR + [ $>15-25$ ]% CO<sub>2</sub>

Diameter (mm)	Welding positions				
	PA/1G	PB/2F	PC/2G	PF/3Gup	PE/4G
1.2	130-280A	150-280A	150-230A	160-240A	150-220A
	22-32V	23-32V	23-30V	23-27V	23-28V