

LOW ALLOY STEEL CONSUMABLES & FLUXES CLASSIFICATION FOR FCAW (AWS A / SFA 5.29)

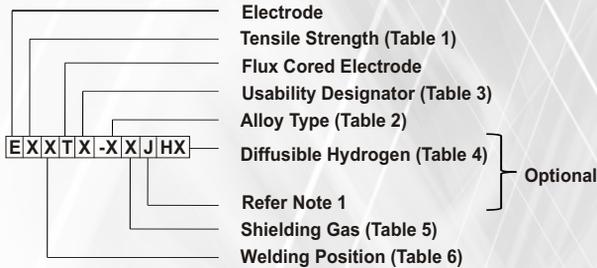


Table 1: Tensile Strength of undiluted weld metal

Code Digit	Tensile Strength psi (MPa)
6	60,000-80,000 (430-550)
7	70,000-90,000 (490-620)
8	80,000-100,000 (550-690)
9	90,000-110,000 (620-760)
10	100,000-120,000 (690-830)
11	110,000-130,000 (760-900)
12	120,000-140,000 (830-970)

Table 2: Alloy Type (Weld metal)

Code Digit	Alloy Type
A1	C-Mo Steel
B1,B1L,B2,B2L,B3B3L,B3H, B6,B6L,B8,B8L,B9	C-Cr-Mo Steel
Ni1,Ni2,Ni3	C-Ni Steel
D1,D2,D3	C-Mn-Mo Steel
K1,K2,K3,K4,K5,K6,K7,K8,K9	Other Low Alloy steels
W2	Weathering Steel

'L' indicates Low Carbon Version & 'H' indicates High Carbon Version

Table 3: Usability Designator

Usability Designator	Polarity	Application
1, 4, 6,	DCEP	M
7, 8, 11	DCEN	M
5	DCEP or DCEN	M
G	Not Specified	

M indicates single and multiple pass welding

Table 4: Diffusible Hydrogen

Code Digit	Diffusible Hydrogen Content, average (ml/100g Deposited Metal) max
H4	4
H8	8
H16	16

Table 5: Shielding Gas

Code Digit	Shielding Gas
C	100% CO ₂
M	75-80% Ar / Balance CO ₂
No Code	Self-Shielded

Table 6: Welding Position

Code Digit	Welding Position
0	F, H
1	F, H, V-up / V-down, OH

Note 1:

- ⇒ 'J' indicates satisfactory Impact properties up to 20°F (10°C) below the standard testing temperature for that classification



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