

## WELDING ELECTRODE CLASSIFICATIONS

### MILD STEEL COATED ELECTRODES

<b>E7018-X</b>	<b>E</b>	Indicates that this is an electrode
	<b>70</b>	Indicates how strong this electrode is when welded. Measured in thousands of pounds per square inch.
	<b>1</b>	Indicates in what welding positions it can be used.
	<b>8</b>	Indicates the coating, penetration, and current type used. (See Classification Table below)
	<b>X</b>	Indicates that there are more requirements. (See Additional Requirements below)

### WELDING POSITIONS

- 1** Flat, Horizontal, Vertical (up), Overhead
- 2** Flat, Horizontal
- 4** Flat, Horizontal, Overhead, Vertical (down)

Flat Position - usually groove welds, fillet welds only if welded like a "V"

Horizontal - Fillet welds, welds on walls (travel is from side to side).

Vertical - welds on walls (travel is either up or down).

Overhead - weld that needs to be done upside down.

### CLASSIFICATION TABLE

Class	Electrode Coating	Penetration	Current Type
<b>Exxx0</b>	Cellulose, Sodium	Deep	DCEP
<b>Exxx1</b>	Cellulose, Potassium	Deep	AC, DCEP
<b>Exxx2</b>	Rutile, Sodium	Medium	AC, DCEN
<b>Exxx3</b>	Rutile, Potassium	Light	AC, DCEP, DCEN
<b>Exxx4</b>	Rutile, Iron Powder	Medium	AC, DCEP, DCEN
<b>Exxx5</b>	Low Hydrogen, Sodium	Medium	DCEP
<b>Exxx6</b>	Low Hydrogen, Potassium	Medium	AC, DCEP
<b>Exxx7</b>	Iron Powder, Iron Oxide	Medium	AC, DCEN
<b>Exxx8</b>	Low Hydrogen, Iron Powder	Medium	AC, DCEP
<b>Exxx9</b>	Iron Oxide, Rutile, Potassium	Medium	AC, DCEP, DCEN

### ADDITIONAL REQUIREMENTS

Suffix	Additional Requirement
<b>-1</b>	Increased toughness (impact strength) for E7018 electrodes. Also increased ductility in E7024 electrodes.
<b>-M</b>	Meets most military requirements - greater toughness, lower moisture content as received after exposure, diffusible hydrogen limits for weld metal.
<b>-H4</b>	Indicates the maximum diffusible hydrogen limit measured in millimeters per 100 grams (mL/100g). The 4, 8, and 16 indicates what the limit is. Example: -H4 = 4mL per 100 grams
<b>-H8</b>	
<b>-H16</b>	

### LOW ALLOY STEEL COATED ELECTRODES

<b>E7018-X</b>	<b>E</b>	Indicates that this is an electrode
	<b>70</b>	Indicates how strong this electrode is when welded. Measured in thousands of pounds per square inch.
	<b>1</b>	Indicates in what welding positions it can be used.
	<b>8</b>	Indicates the coating, penetration, and current type used. (See Classification Table above)
	<b>X</b>	Indicates what alloys are in this electrode. (See Suffix Table page 45)

### WELDING POSITIONS

Same as for Mild Steel Coated Electrodes (above)

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Same as for Mild Steel Coated Electrodes (above)