

## Nickel-Molybdenum Alloy Category

AWS ERNiMo-0.....2

AWS ERNiMo-2.....3

AWS ERNiMo-3.....4

AWS ERNiMo-8.....5

**Characteristics:**

- 1.ERNiMo-0 welding wire has excellent corrosion resistance, especially in environments containing chloride ions, and can effectively resist pitting and crevice corrosion. Its high molybdenum content further improves the corrosion resistance in fluorine-containing acidic environments.
- 2.ERNiMo-0 welding wire has excellent welding process, stable arc, beautiful shape, less spatter, and is suitable for a variety of welding processes.
- 3.ERNiMo-0 welding wire has high yield strength and tensile strength, and can withstand large mechanical loads.

**Application:**

1. Used to manufacture high-strength, corrosion-resistant and high-temperature resistant parts.
2. Suitable for welding of chemical equipment, pipelines and containers.
3. Used for welding of nuclear reactors and related equipment.
4. Used for welding of high-strength and corrosion-resistant parts of ships.
5. Suitable for welding of food processing equipment to ensure hygiene and corrosion resistance.

**Power polarity:**DC+

**Chemical composition.**

Item	C	Mn	P	S	Si	Cr	Ni	Mo	Fe
AWS Standard	0.03max	0.20max	0.04max	0.03max	0.15max	2.0-2.0	69.22-72.00	19.0	6.0
Item	W	Al	V	Cu					
AWS Standard	3.0	0.20max	0.60max	0.50max					



**Mechanical properties.**

Mechanical properties	Yield strength MPa	Tensile strength MPa	Elongation %
AWS Standard	≥554 MPa	≥758 MPa	≥21%

**Welding Requirements.**

1. When welding, use low wire energy and it is recommended to use a lower interpass temperature.
2. The arc length is generally controlled at around 4-6 mm.
3. When the wind speed is greater than 0.5 m/s, wind protection measures should be taken.

**Characteristics:**

- 1.ERNiMo-2 welding wire has excellent corrosion resistance, especially in environments containing chloride ions, and can effectively resist pitting and crevice corrosion. Its high molybdenum content further improves the corrosion resistance in fluorine-containing acidic environments.
- 2.ERNiMo-2 welding wire has excellent welding process, stable arc, beautiful shape, less spatter, and is suitable for a variety of welding processes.
- 3.ERNiMo-2 welding wire has high yield strength and tensile strength, and can withstand large mechanical loads.

**Application:**

1. Used to manufacture high-strength, corrosion-resistant and high-temperature resistant parts.
2. Suitable for welding of chemical equipment, pipelines and containers.
3. Used for welding of nuclear reactors and related equipment.
4. Used for welding of high-strength and corrosion-resistant parts of ships.
5. Suitable for welding of food processing equipment to ensure hygiene and corrosion resistance

**Power polarity:**DC+

**Chemical composition.**

Item	C	Mn	P	S	Si	Cr	Mo	Cu	V
AWS Standard	0.04-0.08	1.0max	0.015max	0.02max	1.0max	6.0-8.0	15.0-18.0	0.5max	10.5max
Item	W	Fe	Co						
AWS Standard	0.5max	5.0max	0.2max						



**Mechanical properties.**

Mechanical properties	Yield strength MPa	Tensile strength MPa	Elongation %
AWS Standard	≥688 MPa	≥858 MPa	≥42%

**Welding Requirements.**

1. It is recommended to use high-purity argon (99.99% or more) as the shielding gas, and the shielding gas flow rate should be 15-25 L/min.
2. The arc length is generally controlled at about 4-6 mm.
3. When the wind speed is greater than 0.5 m/s, windproof measures should be adopted.

**Characteristics:**

- 1.ERNiMo-3 welding wire has excellent corrosion resistance, especially in environments containing chloride ions, and can effectively resist pitting and crevice corrosion. Its high molybdenum content further improves the corrosion resistance in fluorine-containing acidic environments.
- 2.ERNiMo-3 welding wire has excellent welding process, stable arc, beautiful shape, less spatter, and is suitable for a variety of welding processes.
- 3.ERNiMo-3 welding wire has high yield strength and tensile strength, and can withstand large mechanical loads.

**Application:**

1. Used to manufacture high-strength, corrosion-resistant and high-temperature resistant parts.
2. Suitable for welding of chemical equipment, pipelines and containers.
3. Used for welding of nuclear reactors and related equipment.
4. Used for welding of high-strength and corrosion-resistant parts of ships.
5. Suitable for welding of food processing equipment to ensure hygiene and corrosion resistance.

**Power polarity:**DC+

**Chemical composition.**

Item	C	Mn	P	S	Si	Cr	Mo	Cu	V
<b>AWS Standard</b>	0.12max	1.0max	0.04max	0.03max	1.0max	4.0-6.0	23.0-26.0	0.5max	0.6max
Item	W	Fe	Co						
<b>AWS Standard</b>	0.1max	4.0-7.0	2.5max						



**Mechanical properties.**

Mechanical properties	Yield strength MPa	Tensile strength MPa	Elongation %
<b>AWS Standard</b>	≥584 MPa	≥894 MPa	≥42%

**Welding Requirements.**

1. It is recommended to use high-purity argon (99.99% or more) as the shielding gas, and the shielding gas flow rate should be 15-25 L/min.
2. The arc length is generally controlled at about 4-6 mm.
3. When the wind speed is greater than 0.5 m/s, windproof measures should be adopted.

**Characteristics:**

- 1.ERNiMo-8 welding wire has excellent corrosion resistance, especially in environments containing chloride ions, and can effectively resist pitting and crevice corrosion. Its high molybdenum content further improves the corrosion resistance in fluorine-containing acidic environments.
- 2.ERNiMo-8 welding wire has excellent welding process, stable arc, beautiful shape, less spatter, and is suitable for a variety of welding processes.
- 3.ERNiMo-8 welding wire has high yield strength and tensile strength, and can withstand large mechanical loads.

**Application:**

1. Used to manufacture high-strength, corrosion-resistant and high-temperature resistant parts.
2. Suitable for welding of chemical equipment, pipelines and containers.
3. Used for welding of nuclear reactors and related equipment.
4. Used for welding of high-strength and corrosion-resistant parts of ships.
5. Suitable for welding of food processing equipment to ensure hygiene and corrosion resistance.

**Power polarity:**DC+

**Chemical composition.**

Item	C	Mn	P	S	Si	Cr	Ni	Mo	Fe
AWS Standard	0.03max	0.20max	0.04max	0.03max	0.15max	2.0-2.0	69.22-72.00	19.0	6.0
Item	W	Al	V	Cu					
AWS Standard	3.0	0.20max	0.60max	0.50max					



**Mechanical properties.**

Mechanical properties	Yield strength MPa	Tensile strength MPa	Elongation %
AWS Standard	≥454 MPa	≥732 MPa	≥11%

**Welding Requirements.**

1. It is recommended to use high-purity argon (99.99% or more) as the shielding gas, and the shielding gas flow rate should be 15-25 L/min.
2. The arc length is generally controlled at about 4-6 mm.
3. When the wind speed is greater than 0.5 m/s, windproof measures should be adopted.