



# MILLENNIUM ARC 7018-1

STICK (SMAW) WELDING CONSUMABLE





# The Clear Choice

What constitutes a great stick electrode is a matter of personal preference. It has to do with what you're used to and what you expect. Beauty is truly in the eye of the beholder. Millennium Arc® is easy to use for welders of all skill levels with performance, properties and code compliance you can count on. It's a solid performer across a spectrum of utility applications and industries.

If you prefer a low hydrogen stick electrode with a crisp arc and a clear puddle, then Millennium Arc is your ideal choice.

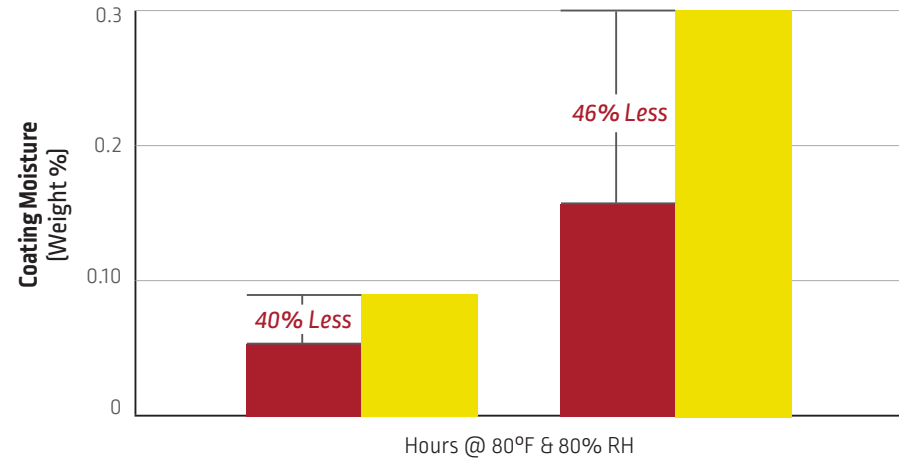
## The Dry Facts

Millennium Arc's resistance to moisture in humid conditions, absorbing up to 50% less than the leading competitive products, will allow you to easily meet your diffusible hydrogen needs

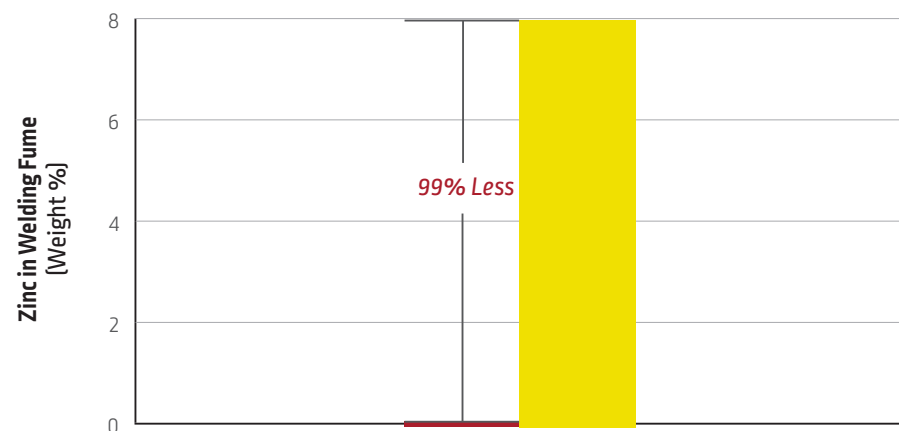
## Virtually No Zinc

The last thing you need on the job is a problem with zinc fumes. And you won't have any with the Millennium Arc electrode. There is no intentional addition of zinc in the electrode, which means significantly less zinc in the welding fume – and a safer environment overall.

Millennium Arc has over 40% less moisture out of the package. As well as after 9 hours of exposure to 80 degrees Fahrenheit and 80% relative humidity



No intentional zinc added to Millennium Arc



Millennium Arc® 7018-1 ESAB® Atom Arc™

## Millennium Arc vs. Competitors

In a blind study to determine performance and preference, welders rated Millennium Arc vs. two competitive 7018 stick electrodes. Six attributes in two welding positions were rated, using a rating scale of 1.0 - 4.0; 1 being the lowest rating and 4 being the best. Millennium Arc unanimously came out as best in class.

Experts agree that regardless of your application, welding position, or joint design, Millennium Arc outperforms the competition. If you want expertise in welding, choose Millennium Arc.

## Large Diameter Millennium Arc 7018-1

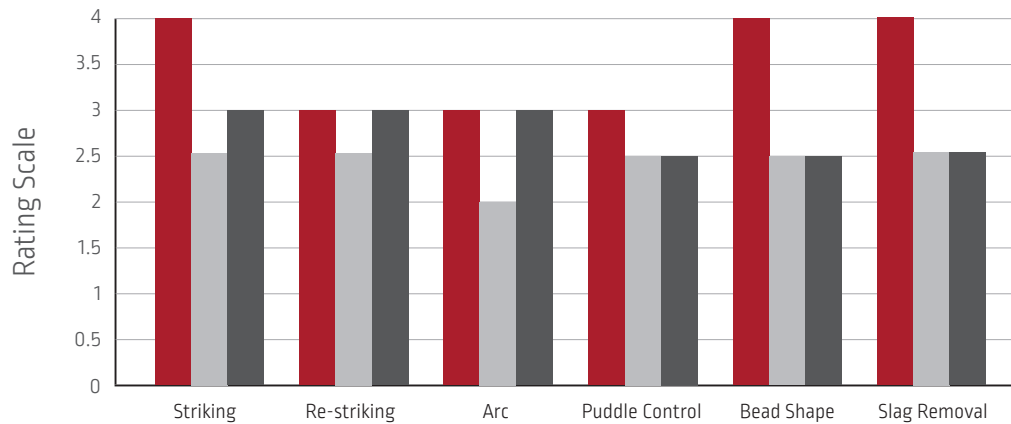
A low-hydrogen electrode designed for pipe spooling

Millennium Arc® 7018-1 gets around. All the way around. This low-hydrogen electrode is engineered for pipe spooling that ensures efficient welds in 360° rotation. You can count on uniform slag coverage, even on a roundabout – and excellent slag removal in the fill and cap passes. But don't take our word for it. A blind test resulted in eight out of 10 welders choosing Millennium Arc over the competition.

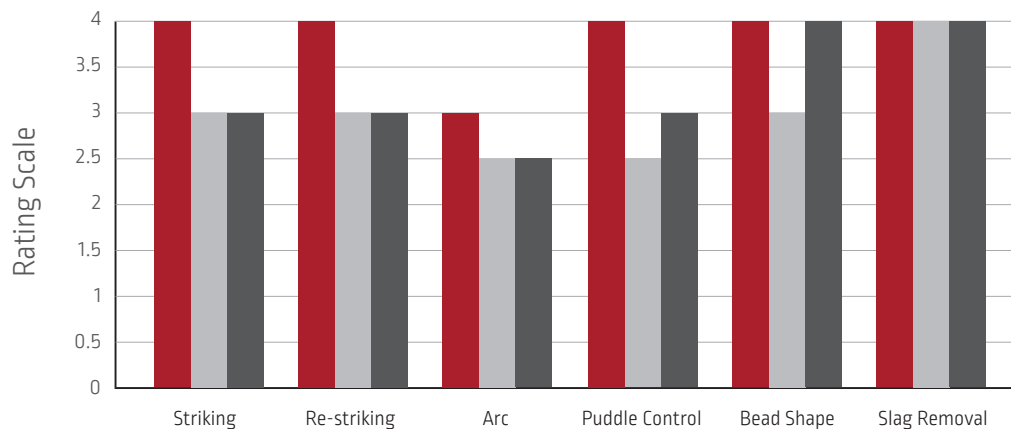
The electrode is designed with various protections against moisture pickup. The patented silver strike coating eliminates rust on the electrode, and the lower porosity level results in fewer weld defects.

The electrode is easily identified by Three Dots®, which is the Lincoln Electric symbol of quality, consistency and unparalleled welding expertise.

2 Pass Vertical Up



3 Pass Horizontal Fillet



Millennium Arc® 7018-1
  Competitor 1
  Competitor 2

## DIAMETERS / PACKAGING

Diameter in (mm)	Length in (mm)	1 lb (0.5 kg) Plastic Tube 6 lb (2.7 kg) Master Carton	10 lb (4.5 kg) Easy Open Can 30 lb (13.6 kg) Master Carton	50 lb (22.7kg) Easy Open Can
3/32 (2.4)	14 (350)	ED036305	ED036326	ED035456
1/8 (3.2)	14 (350)	ED036304	ED036325	ED035314
5/32 (4.0)	14 (350)	-	ED036327	ED035457

## MECHANICAL PROPERTIES<sup>(1)</sup> – As Required per AWS A5.1/A5.1M

	Yield Strength <sup>(2)</sup> MPa (ksi)	Tensile Strength MPa (ksi)	Elongation %	Charpy V-Notch J (ft-lbf) @ -29°C (-20°F)
<b>Requirements</b> - AWS E7018-1 H4R	400 (58) min	480 (70) min	22 min	27 (20) min
<b>Test Results<sup>(3)</sup></b> - As-Welded	440-550 (64-72)	540-600 (78-86)	>27	120-180 (90-130)

## DEPOSIT COMPOSITION<sup>(1)</sup> – As Required per AWS A5.1/A5.1M

	%C	%Mn	%Si	%P	%S	%Ni
<b>Requirements</b> - AWS E7018-1 H4R	0.15 max	1.60 max	0.75 max	0.035 max	0.035 max	0.30 max
<b>Test Results<sup>(3)</sup></b> - As-Welded	0.06-0.08	1.2-1.5	0.4-0.6	0.01-0.02	0.01-0.02	<0.1
	%Cr	%Mo	%V	%Mn + Ni + Cr + Mo + V	Diffusible Hydrogen (mL/100g weld metal)	
<b>Requirements</b> - AWS E7018-1 H4R	0.20 max	0.30 max	0.08 max	1.75 max	4.0 max	
<b>Test Results<sup>(3)</sup></b> - As-Welded	<0.1	<0.1	<0.01	1.3-1.5	1-3	

<sup>(1)</sup>Typical all weld metal. <sup>(2)</sup>Measured with 0.2% offset. <sup>(3)</sup>See test results disclaimer

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### TEST RESULTS

Test results for mechanical properties, deposit or electrode composition and diffusible hydrogen levels were obtained from a weld produced and tested according to prescribed standards, and should not be assumed to be the expected results in a particular application or weldment. Actual results will vary depending on many factors, including, but not limited to, weld procedure, plate chemistry and temperature, weldment design and fabrication methods. Users are cautioned to confirm by qualification testing, or other appropriate means, the suitability of any welding consumable and procedure before use in the intended application.

### CUSTOMER ASSISTANCE POLICY

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