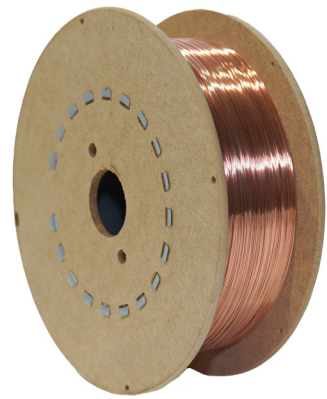


# Copper-Glide™ NS-101US Copper-Coated Welding Wire

**AWS ER70S-3, EM13K**



Copper-Glide™ NS-101US Copper-Coated Welding Wire is a Made-in-America premium mild steel solid filler metal designed to provide our welders with maximum weld quality and user appeal from ER70S-3 and EM13K wire.

With precise control over manganese and silicon contents, this welding wire ensures flat bead profiles, optimal deoxidation, and low-spatter welds for a cleaner job.

**100% Made in the U.S.A. with American steel to meet "Buy America" Standards.**

## Manufacturing Advantages

- Low carbon killed and semi killed steel
- All metal transfer modes of GMAW
- Robotic, mechanized, or semi-automatic welding
- Welding steel with light mill scale, light rust, or thin oil
- Used for single and multi-pass weldments
- Applications requiring a minimum 70,000 psi tensile strength
- Smooth and stable arc characteristics for consistent welding
- Premium copper plating for excellent wear resistance during feeding
- Reduced porosity in welds for better fusion and reduced risk of defects

## Welding Positions

All position welding is possible when using the correct shielding gas blends, welding process, and welding parameters.

## Shielding Gas Blends

- 100% CO<sub>2</sub>
- 75-95% Argon/Balance CO<sub>2</sub>
- 95-98% Argon/Balance O<sub>2</sub>
- Flow rate of 35-50 CFH

## Applications

- Agricultural Equipment
- Auto Body
- Automotive Exhaust
- General Fabrication
- Heavy Equipment
- Pipe Welding
- Pressure Vessels
- Railcars
- Shipbuilding
- Structures
- Trailers

## Specifications

Meets or Exceeds:

- AWS A5.18/A5.18M: ER70S-3
- AWS A5.17: EM13K
- ASME SFA-A5.18: ER70S-3
- MIL-E-23765/1: MIL-70S-3
- CWB W48: B-G 49A 2 C1 S3
- ABS

✓ Made in the USA

## Storage

Welding wire should be stored in a dry, enclosed environment and in its originally sealed package.



3602 North Perkins Road  
Stillwater, OK 74075  
Customer Service: 1-800-777-1618  
www.NSARC.com



# Copper-Glide™ NS-101 Copper-Coated Welding Wire

**AWS ER70S-3, EM13K**

## Typical Mechanical Properties (as welded)

| Certified As   | TENSILE STRENGTH PSI | YIELD STRENGTH PSI | MINIMUM ELONGATION % | CVN IMPACT VALUES @ 0° F |
|--|----------------------|--------------------|----------------------|--------------------------|
| NS Plus -101   | 77,100               | 61,700             | 29                   | 90 ft-lbf                |
| NS Plus 101<br>CopperFree™   | 79,900               | 66,200             | 28                   | 68 ft-lbf                |
| <b>AWS MINIMUM</b>   | <b>70,000</b>        | <b>58,000</b>      | <b>22</b>            | <b>20 ft-lbf</b>         |
| Typically conducted with CO2 shielding gas. Wire performance data available upon request |                      |                    |                      |                          |

## Typical Wire Chemistry Percentages (as required per AWS)

| Certified As            | C                | Mn               | Si               | P                   | S                   | Cu                 | Ni                 | Cr                 | Mo                 | V                  |
|-------------------------|------------------|------------------|------------------|---------------------|---------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| NS Plus® -101 Typ.      | 0.09             | 1.17             | 0.59             | 0.009               | 0.009               | 0.16               | 0.04               | 0.04               | 0.012              | 0.005              |
| NS 101 CopperFree™ Typ. | 0.09             | 1.17             | 0.60             | 0.014               | 0.014               | 0.07               | 0.06               | 0.07               | 0.008              | 0.005              |
| <b>AWS A5.18/A5.18M</b> | <b>0.06/0.15</b> | <b>0.90/1.40</b> | <b>0.45/0.70</b> | <b>0.035 (max.)</b> | <b>0.035 (max.)</b> | <b>0.50 (max.)</b> | <b>0.15 (max.)</b> | <b>0.15 (max.)</b> | <b>0.15 (max.)</b> | <b>0.03 (max.)</b> |
| <b>AWS A5.17/A5.17M</b> | <b>0.06/0.16</b> | <b>0.90/1.40</b> | <b>0.35/0.75</b> | <b>0.030 (max.)</b> | <b>0.030 (max.)</b> | <b>0.35 (max.)</b> | -                  | -                  | -                  | -                  |



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