

Crown ER 409Nb

Gas Metal Arc Welding
(GMAW) MIG Wire

Gas Tungsten Arc Welding
(GTAW) TIG Wire

Stainless Steel Alloy



"The Royal Line"

CROWN ALLOYS COMPANY

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Ferritic Stainless Steel Welding Wire

Typical Applications

Crown ER 409Nb is a ferritic stainless steel welding wire. The addition of niobium results in a preferential reaction with carbon, which will prevent the chromium from forming carbides. This improves corrosion resistance, increases strength at elevated temperatures, and promotes a ferritic microstructure. **Crown ER 409Nb** is most often used to weld 409 or 409Ti base stainless steels. It is used primarily in the automotive industry for welding catalytic converters and other parts of the exhaust system.

Specifications

AWS A5.9/A5.9M
ER 409Nb

- Tensile Strength up to 67,000 psi
- Yield Strength up to 50,500 psi
- Elongation up to 26%

Procedure

GMAW (MIG) Welding Parameters

Clean weld area thoroughly. "Vee" out where necessary. Use DC reverse polarity (DCEP).

| Wire Diameter (inches) | Welding Current (amperage) | Arc Voltage (volts) | Shielding Gas | Gas Flow (cfh) |
|------------------------|----------------------------|---------------------|-------------------------------------|----------------|
| .035 | 155 - 185 | 28 - 30 | 98-99% argon plus 2-1% oxygen or | 25 - 45 |
| .045 | 175 - 225 | 29 - 32 | 97% argon plus 3% CO ₂ | 25 - 45 |

GTAW (TIG) Welding Parameters

Manual Welding – DC straight polarity (DCEN) – Use a 2% thoriated tungsten (Th-2) Red Band

Use Argon Shielding Gas – Gas flow between 25 – 35 cfh

All suggested settings are approximate. Inverter-based welders generally require less heat input (lower amps). Welds should be tested to comply to your specifications.

Sizes and Part Numbers

| TIG Diameter | Part Numbers | |
|--------------|--------------|-------------|
| | 1# Package | 10# Package |
| 1/16 x 36" | ST409/TL-BP | ST409/TL |
| 3/32 x 36" | ST409/TN-BP | ST409/TN |
| 1/8 x 36" | ST409/TO-BP | ST409/TO |

| MIG Diameter | Part Numbers | | |
|--------------|------------------|-----------|-------------|
| | 2 lb (4") Spools | 8" Spools | 33lb Spools |
| .035 | SS409/1F | SS409/2F | SS409/3F |
| .045 | SS409/1G | SS409/2G | SS409/3G |



!!!! WARNING !!!!



WELDING FUMES AND GASES CAN BE DANGEROUS TO YOUR HEALTH.

BEFORE USING THIS PRODUCT THE WELDER (END-USER) MUST READ AND UNDERSTAND THE COMPLETE PRODUCT WARNING LABEL AND THE NEW 16 SECTION SAFETY DATA SHEET (SDS).

THE SAFETY DATA SHEET (SDS) WHICH OUTLINES THE POTENTIAL HEALTH HAZARDS AND SAFETY INFORMATION RELATED TO THIS PRODUCT CAN BE DOWNLOADED FROM THE SDS PORTION OF THIS WEBSITE. IT IS ALSO AVAILABLE FROM YOUR EMPLOYER AND WELDING SUPPLY DISTRIBUTOR.

DO NOT PROCEED WITH USE OF THIS PRODUCT UNTIL YOU READ AND UNDERSTAND THE SAFETY DATA SHEET (SDS) AND PRODUCT WARNING STATEMENT.

BE SURE TO CONSULT THE LATEST VERSION OF THE SDS.

SEE THE PRODUCT WARNING LABEL AND SDS FOR COMPLETE WARNING INFORMATION.

