

CWR-309L Welding Wire and Rod

CWR-309L is used to weld base metals of similar chemical composition in wrought or cast form. It is also suitable for joining dissimilar metals such as 18Cr-8Ni stainless steel to mild steel. The low carbon content minimizes the possibility of carbide precipitation.

CONFORMANCES

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|----------------|---|---------|
| AWS A5.9/A5.9M | : | ER 309L |
| ASME SFA-A5.9 | : | ER 309L |
| ISO 14343-B | : | SS 309L |

AWS CHEMICAL COMPOSITION (TYPICAL)

| %C | %Cr | %Ni | %Mo | %Mn |
|---------------------|---------------------|---------------------|------------------|-------------------|
| 0.03 max 0.015 | 23.0 – 25.0 23.4 | 12.0 – 14.0 13.6 | 0.75 max 0.08 | 1.0 – 2.5 1.65 |
| %Si | %P | %S | %Cu | Total Others |
| 0.30 – 0.65 0.04 | 0.03 max 0.02 | 0.03 max 0.01 | 0.75 max 0.06 | 0.50 max |

TYPICAL WELD METAL MECHANICAL PROPERTIES

| | | |
|------------------|---|------------|
| Yield Strength | : | 59,000 psi |
| Tensile Strength | : | 87,000 psi |
| Elongation | : | 35 % |

TYPICAL WELDING PARAMETERS

| Process | Diameter | | Voltage | Amperage | Gas/Flux |
|---------------|----------|--------|---------|-----------|--------------------------|
| TIG (GTAW) | 1/16" | 1.6 mm | 14 – 18 | 90 – 130 | 100% Ar |
| | 3/32" | 2.4 mm | 15 – 20 | 120 – 175 | 100% Ar |
| | 1/8" | 3.2 mm | 16 – 20 | 150 – 220 | 100% Ar |
| MIG (GMAW) | .035" | 0.9 mm | 26 – 31 | 150 – 230 | 98%Ar – 2%O ₂ |
| | .045" | 1.1 mm | 28 – 32 | 180 – 280 | 98%Ar – 2%O ₂ |
| Sub Arc (SAW) | .093" | 2.4 mm | 28 – 33 | 250 – 450 | |
| | .125" | 3.2 mm | 29 – 34 | 300 – 500 | |

*All parameters are suggested as basic guidelines only and will vary depending on joint design, number of passes and other factors.

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| <p>IMPORTANT: SPECIAL VENTILATION AND/OR EXHAUST REQUIRED</p> <p>BEFORE USE, READ AND UNDERSTAND THE SAFETY DATA SHEET (SDS) FOR THIS PRODUCT AND SPECIFIC INFORMATION PRINTED ON THE PRODUCT CONTAINER.</p> |
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