

# DUAL SHIELD 810X-Ni1

MILD STEEL  
FLUX CORED WIRES

## Tech Data Sheet



| TYPICAL MECHANICAL PROPERTIES             |                 |      |
|---|-----------------|------|
|   | AS WELDED       |      |
| Shielding Gas                             | CO <sub>2</sub> |      |
| Yield Strength, ksi (MPa)                 | 86              | 590  |
| Tensile Strength, ksi (MPa)               | 92              | 635  |
| % Elongation (in 2", 51mm)                | 29              |      |
| TYPICAL CHARPY V-NOTCH IMPACT PROPERTIES  |                 |      |
| Shielding Gas                             | CO <sub>2</sub> |      |
| Testing Temperature                       | FT.-LBS. (J)    |      |
| -20°F (-29°C)                             | 60              | 81   |
| -40°F (-40°C)                             | 45              | 61   |
| TYPICAL UNDILUTED WELD METAL ANALYSIS (%) |                 |      |
| Shielding Gas                             | CO <sub>2</sub> |      |
| Carbon                                    | 0.04            |      |
| Manganese                                 | 1.3             |      |
| Silicon                                   | 0.6             |      |
| Phosphorus                                | 0.010           |      |
| Sulfur                                    | 0.009           |      |
| Nickel                                    | 1.0             |      |
| TYPICAL WELDING RANGE                     |                 |      |
| Wire Feed Speed                           | Low             | High |
|   | CO <sub>2</sub> |      |
| .045"                                     | 160             | 400  |
| .052"                                     | 160             | 250  |
| 1/16"                                     | 98              | 250  |
| Volts                                     | Low             | High |
|   | CO <sub>2</sub> |      |
| .045"                                     | 21.0            | 27.5 |
| .052"                                     | 21.0            | 26.5 |
| 1/16"                                     | 20.0            | 26.5 |
| Amps                                      | Low             | High |
|   | CO <sub>2</sub> |      |
| .045"                                     | 115             | 240  |
| .052"                                     | 124             | 250  |
| 1/16"                                     | 127             | 263  |

Typical Welding Parameters on reverse side of the sheet.

Dual Shield 810X-Ni1 is an all-position 1% Nickel flux cored wire for general purpose welding. Dual Shield 810X-Ni1 provides outstanding operator appeal with an easily controlled arc, improved operation at both lower and higher current levels, minimal spatter and easily removed slag. Dual Shield 810X-Ni1 is designed for use with 100% CO<sub>2</sub>. It is an excellent choice for welding on COR-TEN® steel in applications where weathering grade wires are not desirable.

### Applications

Power Transmission  
Bridges  
Shipbuilding  
Rail Road Car  
General Fabrication  
Barges  
Light Equipment/Heavy Structural

### Welding Process

FCAW

### Classifications/Approvals

AWS A5.29; E81T1-Ni1C  
Certified by C.W.B. - CSA W48  
Seismic Certified

### Welding Position

All Position

### Filler Metal Type

Low Alloy Steel

### Recommended Shielding Gas

CO<sub>2</sub>

[www.dualshieldx.com](http://www.dualshieldx.com)

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ESAB Welding & Cutting Products

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### TYPICAL WELDING PARAMETERS

| Gas: CO <sub>2</sub><br>0.045"       |      |     | Gas: CO <sub>2</sub><br>0.052" |      |     | Gas: CO <sub>2</sub><br>1/16" |      |     |
|--------------------------------------|------|-----|--------------------------------|------|-----|-------------------------------|------|-----|
| WFS                                  | VOLT | AMP | WFS                            | VOLT | AMP | WFS                           | VOLT | AMP |
| 160                                  | 21.0 | 115 | 160                            | 21.0 | 124 | 98                            | 20.0 | 127 |
| 184                                  | 21.7 | 128 | 169                            | 21.6 | 137 | 113                           | 20.6 | 141 |
| 208                                  | 22.3 | 140 | 178                            | 22.1 | 149 | 128                           | 21.2 | 154 |
| 232                                  | 23.0 | 153 | 187                            | 22.7 | 162 | 144                           | 21.9 | 168 |
| 256                                  | 23.6 | 165 | 196                            | 23.2 | 174 | 159                           | 22.5 | 181 |
| 280                                  | 24.3 | 178 | 205                            | 23.8 | 187 | 174                           | 23.1 | 195 |
| 304                                  | 24.9 | 190 | 214                            | 24.3 | 200 | 189                           | 23.7 | 209 |
| 328                                  | 25.6 | 203 | 223                            | 24.9 | 212 | 204                           | 24.3 | 222 |
| 352                                  | 26.2 | 215 | 232                            | 25.4 | 225 | 220                           | 25.0 | 236 |
| 376                                  | 26.9 | 228 | 241                            | 26.0 | 237 | 235                           | 25.6 | 249 |
| 400                                  | 27.5 | 240 | 250                            | 26.5 | 250 | 250                           | 26.2 | 263 |
| Out-of-position welding applications |      |     |                                |      |     |                               |      |     |

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