

# Select Ni6S

Low Alloy / Flux Shielded / Submerged Arc

PRODUCT DATA SHEET

## FEATURES

- Intended for single and multiple pass welding where a minimum strength level of 90 ksi is required coupled with low temperature impact toughness.
- Higher deposition rates than solid wire when run at the same current level.
- Exhibits broader and shallower bead profile than when using solid wire, reducing the tendency for burn through.
- Capable of running directly over root passes with proper procedure - eliminating requirement for a hot pass
- Easy slag removal - reduces post weld cleanup time
- Arcflux BF-10MW is the recommended flux, although other neutral fluxes with high basicity can be used in place of this.

## CONFORMANCES

AWS A5.23

F9A6-ECNi6-Ni6-H4 (ARCFLUX BF 5.1)  
F9A8-ECNi6-Ni6-H4 (ARCFLUX BF-10 MW)  
F9P8-ECNi6-Ni6-H4 (ARCFLUX BF-10 MW)

## DIAMETERS [in (mm)]

5/64 (2.0), 3/32 (2.4), 1/8 (3.2), 5/32 (4.0)

## POSITIONS



## FLUX

ArcFlux BF-5.1, ArcFlux BF-10MW

## POLARITY

DCEP

## TYPICAL WELD DEPOSIT CHEMISTRY [WT%]

| Flux             | C    | Cu   | Mn   | Mo   | Ni   | P     | S     | Si   |
|------------------|------|------|------|------|------|-------|-------|------|
| ARCFLUX BF 5.1   | 0.09 | 0.05 | 1.48 | 0.16 | 0.99 | 0.013 | 0.010 | 0.45 |
| ARCFLUX BF-10 MW | 0.11 | 0.04 | 1.34 | 0.15 | 1.04 | 0.009 | 0.007 | 0.34 |

## TYPICAL MECHANICAL PROPERTIES

| Flux             | Tensile Strength<br>ksi (MPa) | Yield Strength<br>ksi (MPa) | Elongation (%) | Weld Condition | PWHT Temp       | CVN @<br>-40°F (-40°C)<br>ft-lb (J) | CVN @<br>-60°F (-50°C)<br>ft-lb (J) | CVN @<br>-80°F (-60°C)<br>ft-lb (J) |
|------------------|-------------------------------|-----------------------------|----------------|----------------|-----------------|-------------------------------------|-------------------------------------|-------------------------------------|
| ARCFLUX BF 5.1   | 96 (663)                      | 83 (571)                    | 27             | As-Welded      | -               | 55 (75)                             | 36 (49)                             | -                                   |
| ARCFLUX BF-10 MW | 94 (652)                      | 81 (561)                    | 27             | As-Welded      | -               | -                                   | -                                   | 52 (71)                             |
| ARCFLUX BF-10 MW | 94 (651)                      | 82 (563)                    | 28             | PWHT           | 1150°F for 1 hr | -                                   | -                                   | 36 (49)                             |



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Notice: Be sure to follow all your employers safety practices, policies and procedures when using this product. Refer to CSA W117.2 and ANSI Z49.1 Safety in Welding, Cutting and Allied Processes for further information and the manufactures SDS sheet. The results reported are based upon testing of the product under controlled laboratory conditions in accordance with American Welding Society Standards. Actual use of the product may produce different results due to varying conditions. An example of such conditions would be electrode size, plate chemistry, environment, weldment design, fabrication methods, welding procedure and service requirements. Thus the results are not guarantees for use in the field. The manufacturer disclaims any warranty of merchantability or fitness for any particular purpose with respect to its products.

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## RECOMMENDED WELDING PARAMETERS \*\*

| Diameter in (mm) | Flux             | Position          | WFS* in/min (m/min) | Amps | Volts | CTWD* in (mm)       |
|------------------|------------------|-------------------|---------------------|------|-------|---------------------|
| 5/64 (2.0 mm)    | ARCFLUX BF-10 MW | Flat & Horizontal | 100 (2.5)           | 200  | 27    | 3/4 - 1 (19 - 25)   |
|                  |                  | Flat & Horizontal | 180 (4.6)           | 300  | 27.5  | 3/4 - 1 (19 - 25)   |
|                  |                  | Flat & Horizontal | 260 (6.6)           | 400  | 28    | 3/4 - 1 (19 - 25)   |
| 3/32 (2.4 mm)    | ARCFLUX BF-10 MW | Flat & Horizontal | 60 (1.5)            | 250  | 27.5  | 1 - 1 1/4 (25 - 32) |
|                  |                  | Flat & Horizontal | 85 (2.2)            | 350  | 28    | 1 - 1 1/4 (25 - 32) |
|                  |                  | Flat & Horizontal | 130 (3.3)           | 450  | 29    | 1 - 1 1/4 (25 - 32) |
| 1/8 (3.2 mm)     | ARCFLUX BF-10 MW | Flat & Horizontal | 55 (1.4)            | 350  | 28.5  | 1 - 1 1/4 (25 - 32) |
|                  |                  | Flat & Horizontal | 75 (1.9)            | 450  | 29.5  | 1 - 1 1/4 (25 - 32) |
|                  |                  | Flat & Horizontal | 100 (2.5)           | 550  | 30.5  | 1 - 1 1/4 (25 - 32) |
| 5/32 (4.0 mm)    | ARCFLUX BF-10 MW | Flat & Horizontal | 50 (1.3)            | 450  | 30    | 1 - 1 1/4 (25 - 32) |
|                  |                  | Flat & Horizontal | 65 (1.7)            | 550  | 31    | 1 - 1 1/4 (25 - 32) |
|                  |                  | Flat & Horizontal | 80 (2.0)            | 650  | 32    | 1 - 1 1/4 (25 - 32) |

\* WFS = Wire Feed Speed, CTWD = Contact Tip To Work Distance

\*\*The parameters listed are recommended starting points of operation and the ranges for amperage, wfs, and voltage could be extended based on fitness for application. For products with "all-position" capability, as determined and listed in classification, the position recommendation can be determined based on operator skill and material thickness and isn't limited to the listing.

## PACKAGING (lbs (kgs))

33 (15) Spools, 60 (27.2) Coils, 500 (226.8) Round Drum, 800 (362.9) Hex Drum, 900 (408.2) Hex Drum

\*Some packaging options may not be available depending on diameter and product. Special package options may be available upon request.

## STORAGE AND HANDLING

All products should be stored in original packaging, in dry conditions and handled with care. For more information refer to our website.



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