

# Ultramet™ B™ 316NF

## TOP FEATURES

- Controlled carbon and niobium for optimum corrosion resistance and creep performance
- Designed to eliminate thermal fatigue and shock resistance at temperatures up to 1000°C
- Special control of residuals coupled with a high manganese content ensures freedom from microfissuring.
- Recovery is about 120%

## CLASSIFICATION

EN ISO 3581-A E 18 15 3 L B 4 2

## CURRENT TYPE

DC+

## WELDING POSITIONS

All position, except vertical down

## CHEMICAL COMPOSITION (WEIGHT %), TYPICAL, ALL WELD METAL

	C	Mn	Si	S	P	Cr	Ni	Mo	Cu	N
Max.	0.04	4.0	0.90	0.025	0.030	19.5	17.0	3.5	0.5	0.2
Typical	<0.03	3.5	0.4	0.01	0.02	18	16	2.8	<0.1	0.15

## MECHANICAL PROPERTIES, TYPICAL, ALL WELD METAL

As welded		Min.	Typical
Tensile strength	(MPa)	560	610
0.2% Proof strength	(MPa)	300	440
Elongation (%)	4d	not specified	38
	5d	30	35
Reduction of area (%)		not specified	50
Impact ISO-V (J)	-196°C*	not specified	50
Lateral expansion* (mm)	-196°C*	0.38	0.6

\*Useful impact properties are maintained down to 4 °K (-269 °C) and exceeds proposed ASME Code recommendation.

## OUTPUT RANGE

Diameter x Length (mm)	Current range (A)
3.2 x 350	75-120
4.0 x 350	100-155

## PACKAGING AND AVAILABLE SIZES

Diameter x Length (mm)	Packaging	Electrodes/pack	Net weight/pack (kg)	Item number
3.2 x 350	VPMD	40	2.0	UMB316NF-32-2
4.0 x 350	VPMD	58	2.0	UMB316NF-40-2

### TEST RESULTS

Test results for mechanical properties, deposit or electrode composition and diffusible hydrogen levels were obtained from a weld produced and tested according to prescribed standards, and should not be assumed to be the expected results in a particular application or weldment. Actual results will vary depending on many factors, including, but not limited to, weld procedure, plate chemistry and temperature, weldment design and fabrication methods. Users are cautioned to confirm by qualification testing, or other appropriate means, the suitability of any welding consumable and procedure before use in the intended application

Safety Data Sheets (SDS) are available here:



Subject to Change – The information is accurate to the best of our knowledge at the time of printing.  
Please refer to [www.lincolnelectric.eu](http://www.lincolnelectric.eu) for any updated information.