

UNS S31600 | WN 1.4401
PRE: 23.5 - 27.0

Supernova 316®

With its combination of high break loads and good pitting and crevice corrosion resistance, Supernova 316® is a cost-effective solution for less corrosive oil and gas wells with zero H₂S.

Manufactured in Switzerland and certified to 9001: 2008 all Supernova Slicklines are fully traceable, 100% Weld Free, 100% Eddy Current Tested and Wrap Tested.

All are produced with a consistent, tightly controlled surface finish, wire helix and wire cast for optimal spooling and in-service performance.

Supernova 316® is a proven alternative to GD316™, UGI® Slick B29 and Zapp 316.

Key Characteristics

- Good general corrosion resistance in wells with medium concentrations of CO₂ (up to 30%) and low chlorides (up to 2.5%) with both moderate Bottom Hole Temperatures and Pressures and no H₂S
- Excellent resistance to general corrosion
- High break loads due to high tensile strength
- May be used in temperatures up to 150°C in less corrosive environments
- Subject to pitting and crevice corrosion in warm chloride environments and to stress corrosion cracking above 60°C
- An economical option where carbon (plow) slicklines may fail due to corrosion
- Not recommended for wells containing H₂S

Key Data

Standard Diameter ¹	Min Breaking Load	Min Tensile		Nominal Weight	Minimum Slickline Stretch ²	Minimum Sheave Diameter
Inches	Ibf	N/mm ²	Ksi	lbs/ 1000ft	Inch/100ft/ 100lb	Inches
0.092	1420	1460	214	22.64	0.83	11
0.108	1940	1440	212	31.20	0.60	13
0.125	2530	1420	206	41.80	0.45	15
0.140	3130	1410	203	53.00	0.36	17
0.160	4050	1380	202	69.00	0.22	20

¹ Tolerance +/-0.001" - other diameters are available on request. ² Weight of tool string plus weight of wire of the drum.

Standard Lengths 15,000ft | 18,000ft | 6,000m | 20,000ft | 7,000m | 25,000ft | 8,000m | 30,000ft

Other lengths are available on request.

Chemical Composition

Element		C	Si	Mn	P	S	Cr	Mo	Cu	Ni	N
Weight %	Min	-	-	-	-	-	16.50	2.00	-	10.00	0.03
	Max	0.08	1.00	2.00	0.045	0.030	18.00	2.60	-	13.80	0.06

Corrosion Resistance

PRE Number (PRE)

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$$\text{PRE} = \text{Cr} + 3.3 \times \text{Mo} + 16 \times \text{N}$$

Pitting Resistance Equivalent numbers (PRE) are a way of comparing the pitting corrosion resistance of various stainless steels based on the levels of chromium, molybdenum and nitrogen they contain with the most frequently used formula and Novametal's preferred method for calculating PRE numbers being :

$$\text{PRE} = \text{Chromium} + 3.3 \times \text{Molybdenum} + 16 \times \text{Nitrogen}.$$

Some suppliers may use a factor of $30 \times \text{N}$, resulting in a marginally inflated PRE Number.

Grade Selection

To ensure you obtain the optimal slickline for your requirements we will be pleased to make a recommendation on the most cost-effective material selection. Well environment details may be sent by email to slickline@novametal.co.uk

Physical Properties

Density	g/cm ³	7.95
Coefficient of Linear Expansion	μm/m/°C	15.5
Thermal Conductivity	W/m.K	14.47

Safe Working Loads (SWL)

Novametal recommends a maximum safe working load of 60% based on the published Minimum Break Load.

Where permitted by operating procedures and contractual constraints, the SWL may be set at 60% of the certified Actual Breaking Load.

Anyone wishing to operate with a higher SWL is encouraged to contact Novametal Techwire direct before doing so.

Other Mechanical Properties

Yield Strength	(0.2% P.S.)	80 - 90% UTS
Elastic Strength		22 - 28% UTS
Minimum Wraps		8

Certification & Packaging

Reel specific Test Certificates are issued for all slicklines giving alloy chemistry, breaking load and key mechanical properties. All Supernova Slicklines are supplied on metal reels in individual treated timber crates for easy handling and safe storage.

Specific Heat	j/kg.K	491
Resistivity	μOhm Cm	74
Magnetic Permeability		1.003

Other Slickline Grades Available

SUPERNOVA 250®

SUPERNOVA 350®

SUPERNOVA 400®

SUPERNOVA 750®

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Novametal Wire UK Ltd. is a subsidiary of Novametal SA and the global distributor of all Supernova products.

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