

ZERON® 100

UNS S32760 | WN 1.4501

PRE: >41



ZERON® 100

In addition to excellent mechanical properties, ZERON® 100 slicklines have exceptional resistance to chloride and sulphide stress corrosion cracking, acid corrosion and crevice corrosion making it suitable for a wide range of corrosive sour well environments.

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.

Key Characteristics

- Outstanding resistance to chloride-induced stress corrosion cracking (SCC) and sulphide-stress cracking (SSC) in sour-gas conditions
- Resistant to SSC in sour, condensed waters with 0.4 bar partial pressure of H₂S
- Outstanding corrosion resistance under warm seawater conditions, along with superior pitting resistance
- High break loads with good ductility
- May be used in temperatures up to 300°C
- Good atmospheric corrosion enabling safe marine / offshore storage
- High resistance to abrasion, fatigue and corrosion fatigue
- Very resistant in sweet wells, to corrosion by CO₂

Key Data

Standard Diameter ¹	Minimum Breaking Load*	Min Tensile		Nominal Weight	Minimum Sheave Diameter
		N/mm ²	Ksi		
Inches	lbf	N/mm ²	Ksi	lbs/ 1000ft	Inches
0.092	1750 - 1800	1805	263	22.10	11
0.108	2350 - 2400	1800	260	30.55	13
0.125	3150 - 3200	1820	263	41.03	15
0.140	3950 - 4050	1810	263	51.54	17
0.160	5050 - 5150	1760	256	67.45	20

¹ Tolerance +/-0.001" - other diameters are available on request.

* When using a portable wire tester expect a MBL figure up to 25% less than the true figure obtained on our in-house calibrated equipment.

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	W
Weight %	Min	-	-	-	-	-	24.50	3.00	0.50	6.00	0.20	0.50
	Max	0.03	1.00	1.00	0.03	0.015	26.00	4.00	1.00	8.00	0.30	1.00

Corrosion Resistance

PRE Number (PRE)

PRE: >41

$$PRE = Cr + 3.3 \times Mo + 16 \times N$$

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:

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

Some suppliers may use a factor of 30 x 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	784
Coefficient of Linear Expansion	µm/m/°C	12.8 - 13.8
Thermal Conductivity	W/m.K	12.90

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.)	75 - 90% UTS
Elastic Strength		35 - 50% 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	482
Resistivity	µOhm Cm	0.85
Magnetic Permeability		29

Other Slickline Grades Available

SUPERNOVA 316®

SUPERNOVA 400®

SUPERNOVA 700®

SUPERNOVA 750®

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