SUPERNOVA 400®

UNS S32205 | S31803 | WN 1.4462

PRE: 31.7-37

NOVAMETAL Wire UK Ltd

PEIME

Supernova 400®

Supernova 400® is a tried and tested cost-effective solution for service in corrosive oil and gas wells with medium concentrations of CO_2, Chlorides and H_2S.

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 400® is a proven alternative to GD22™, SUPA40®, SAF 2205, UGI® Slick D44 and Alloy 2205

Key Characteristics

- Suitable for service in wells with a maximum H_2S partial pressure of 3 psi
- Very good in high CO_2 of up to 30% with zero H_2S
- Very good corrosion resistance in concentrations of CO_2 up to 35% with no H_2S
- Excellent in high Chloride concentrations of up to 30%
- High tensile strength providing high break loads
- High resistance to pitting and stress corrosion cracking (SCC) in environments with chloride and CO_2.
- Can be used in High Temperatures up to 280°C

Key Data

Standard Diameter[1]	Min Breaking Load	Min Tensile		Nominal Weight	Minimum Slickline Stretch[2]	Minimum Sheave Diameter
Inches	lbf	N/mm^2	Ksi	lbs/ 1000ft	Inch/100ft/ 100lb	Inches
0.092	1630	1690	245	22.48	0.78	11
0.108	2240	1620	239	30.95	0.57	13
0.125	2850	1550	232	41.49	0.42	15
0.140	3500	1530	227	52.10	0.34	17
0.160	4200	1480	209	68.03	0.26	20

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

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	-	-	-	-	-	21.00	2.50	-	4.50	0.15
	Max	0.03	1.00	2.00	0.035	0.015	23.00	3.40	-	6.00	0.20

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Corrosion Resistance

PRE Number (PRE)

PRE: 31.7-37

PRE = Cr + 3.3 x Mo + 16 x 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 = Chromium + 3.3 x Molybdenum + 16 x 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 **enquiries@pei-me.com**

Physical Properties

Density	g/cm^3	7.8
Coefficient of Linear Expansion	µm/m/°C	13.0
Thermal Conductivity	W/m.K	14.0

Specific Heat	j/kg.K	470
Resistivity	µOhm Cm	85
Magnetic Permeability		>25

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.

Other Slickline Grades Available

ZERON® 100 SUPERNOVA 316® SUPERNOVA 700® SUPERNOVA 750®

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