

## GD22™ Slickline

### UNS S31803

GD22™ is a duplex stainless steel suitable for well conditions with medium concentrations of CO<sub>2</sub>, up to 35% with no H<sub>2</sub>S present and up to 30% chlorides where H<sub>2</sub>S partial pressure is 3% max. The duplex structure of GD22™ improves the corrosion resistance and strength compared to ASTM 316 stainless steel. GD22™ is characterized by excellent resistance to pitting and crevice corrosion as well as resistance to chloride stress corrosion; GD22™ also exhibits high resistance to general corrosion. GD22™ slicklines are available in continuous weld free lengths up to 30,000+ ft (9145 m). Every GD22™ line is 100% NDT and inspected. GD™ slicklines are shipped on steel reels. Custom lengths and diameters are available.

#### Chemical Compositional Range (wt. %)

	Ni	Cr	Mo	Si	N	Mn	P	S	C	PRE = %Cr + 3.3 x % Mo + 16 x %N
Min.	4.5	21.0	2.5		0.14					
Max.	6.5	23.0	3.5	1.0	0.20	2.0	0.03	0.020	0.03	PRE = 31.5 to 37.7

#### Physical Properties

Density	0.282 lbs./in <sup>3</sup>	7.8 g / cm <sup>3</sup>
Thermal Expansion	7.2 x 10 <sup>-6</sup> (32° F to 212° F)	13.0 x 10 <sup>-6</sup> (0° to 100° C)
Thermal Conductivity	131.7 BTU in/Ft <sup>2</sup> . h . °F (@212° F)	19.0 W/m. ° K (@ 100 °C)

Dia. (in.)	Dia. (mm)	NOMINAL Breaking Load (lbf)	NOMINAL Breaking Load(kN)	NOMINAL Wt/1000ft (lbs.)	NOMINAL Wt/1000m (kg)
.092	2.34	1,600	7.12	22.42	33.48
.108	2.74	2,200	9.79	31.00	46.14
.125	3.18	3,000	13.34	41.53	61.80
.140	3.56	3,650	16.24	52.09	77.52
.150	3.81	4,100	18.24	59.80	88.99
.160	4.06	4,400	19.57	68.04	101.26

To maximize the life of your GD™ Slickline:

- Use properly sized sheaves (min. sheave diameter = 120 x wire OD) and inspect them for excessive wear
- Ensure the sheaves rotate freely
- Always use new guides in the stuffing box
- Avoid kinking the line
- Layer winding or smooth wrapping the wire onto the winch drum will result in extended life / less damage and reduced likelihood of small kinks
- Prevent the line from rubbing the side of the drum, dragging on the ground, over shafts or other equipment
- Maintain the natural curvature of the wire, maintain constant tension during winding and re-spooling operations
- Exercise extreme caution during jarring operations, check “jarred” lines for possible stretch (reduced wire diameter) or other damage
- When running the line down hole avoid sudden brake application
- Never store reels on their sides
- Maintaining a logbook for each line is recommended
- Clean the line after each use