

# F51 DUPLEX

## APPLICABLE SPECIFICATIONS

ASTM A182/A276/A479, UNS S31803, NORSOK M-630 MDS D47/D44, W1.4501

A chemical resistant ferritic-austenitic stainless steel. Sea water corrosion resistance and mechanical properties are greater than standard austenitic stainless steels.

## TYPICAL APPLICATIONS

Sealing products, flanges & hubs, valves, valve internals, pumps & turbines, marine.

## CHEMICAL ANALYSIS RANGE (WT%)

|    |             |    |               |   |             |
|----|-------------|----|---------------|---|-------------|
| C  | 0.03 Max    | Cr | 21.00 - 23.00 | N | 0.08 - 0.20 |
| Si | 1.00 Max    | Mo | 2.50 - 3.50   |   |             |
| Mn | 2.00 Max    | P  | 0.03 Max      |   |             |
| Ni | 4.50 - 6.50 | S  | 0.02 Max      |   |             |

## HEAT TREATMENT

SQA bar stock is in the solution annealed & water quenched condition

## TYPICAL MECHANICAL PROPERTIES IN SOLUTION ANNEALED CONDITION

|                            |   |
|----------------------------|---|
| 0.2% Yield Strength        | 65000 PSI (450 MPa) min                 |
| Tensile Strength           | 90000 PSI (650 MPa) min                 |
| Elongation                 | 25% min                                 |
| Reduction of Area          | 45% min                                 |
| Hardness                   | 28 HRC                                  |
| Charpy V Notch @ -50 DEG C | 70 Joules min average (up to 254mm DIA) |

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