

Stainless Steel

1.4501 S32760 (F55) Super Duplex

Datasheet Updated
05 August 2021

RANGE

Product Form	Size Range
Round Bar Peeled K12	5/8" - 3"

SPECIFICATIONS

Commercial	F55
EN	1.4501
US	S32760

High performance duplex steel with additions of chromium, molybdenum, and nitrogen for enhanced pitting and crevice corrosion resistance.

CHEMICAL COMPOSITION

UNS S32760 1.4501 Steel

Element	% Present
Carbon (C)	0.00 - 0.03
Chromium (Cr)	24.00 - 26.00
Manganese (Mn)	0.00 - 1.00
Silicon (Si)	0.00 - 1.00
Phosphorous (P)	0.00 - 0.03
Sulphur (S)	0.00 - 0.01
Nickel (Ni)	6.00 - 8.00
Nitrogen (N)	0.20 - 0.30
Copper (Cu)	0.50 - 1.00
Molybdenum (Mo)	3.00 - 4.00
Tungsten (W)	0.50 - 1.00
Iron (Fe)	Balance

ALLOY DESIGNATIONS

- ASTM A479
- ASTM A276
- NACE MR0175 ISO 15156
- NORSOK M630
- 1.4501
- F55

SUPPLIED FORMS

- Bar
- Fittings & Flanges
- Pipe
- Tube
- Sheet
- Rod
- Plate

APPLICATIONS

- Process industry components in nitric acid, dioxide, polypropylene & PVC production, caustic evaporators
- Equipment handling organic & fatty acids
- Marine industry and shipbuilding propellers, shafts, rudders, shaft seals, pumps, bolts, fasteners, valves, instrumentation
- Oil and chemical tankers
- Oil & Gas industry pumps, valves, pipe, vessels, wellhead equipment, subsea equipment
- Pollution control systems, fans and pumps, wet scrubbers, incinerators, flue gas desulphurisation (FGD)
- Pulp & paper industry components such as black liquor heater tubes, digester blow valves, rotary feed valves, I.D.fans, brownstock washers, precipitators, bleaching components
- Food Industry applications including sugar cane centrifuges, corn and vegetable processing plant
- Agrochemicals production such as fertilisers (based on wet phosphoric acid)
- Sewage treatment, seawater cooling, desalination plants

CHARACTERISTICS

- Excellent corrosion resistance in a wide variety of corrosive chemicals
- Pitting Resistance Equivalent number (PREN) of >40
- Outstanding resistance to pitting and crevice corrosion in seawater and other chloride containing environments
- Critical Pitting Temperature exceeding 50°C
- High strength compared to austenitic and 22%Cr duplex stainless steels
- Excellent ductility and impact strength at both ambient and sub-zero temperatures
- High resistance to abrasion, erosion and cavitation erosion
- Excellent resistance to stress corrosion cracking in chloride containing environments
- Listed in NACE MR 0175 for sour service
- ASME Approval for Pressure Vessel application

MECHANICAL PROPERTIES

EN 10088-3

Bar & Section Up to 160mm Dia/Thickness

Property	Value
Elongation A50 mm	25 %
Hardness Brinell	270 Max HB
Tensile Strength	750 N/mm ²
0.2% Proof Stress	550 N/mm ²

DISCLAIMER

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