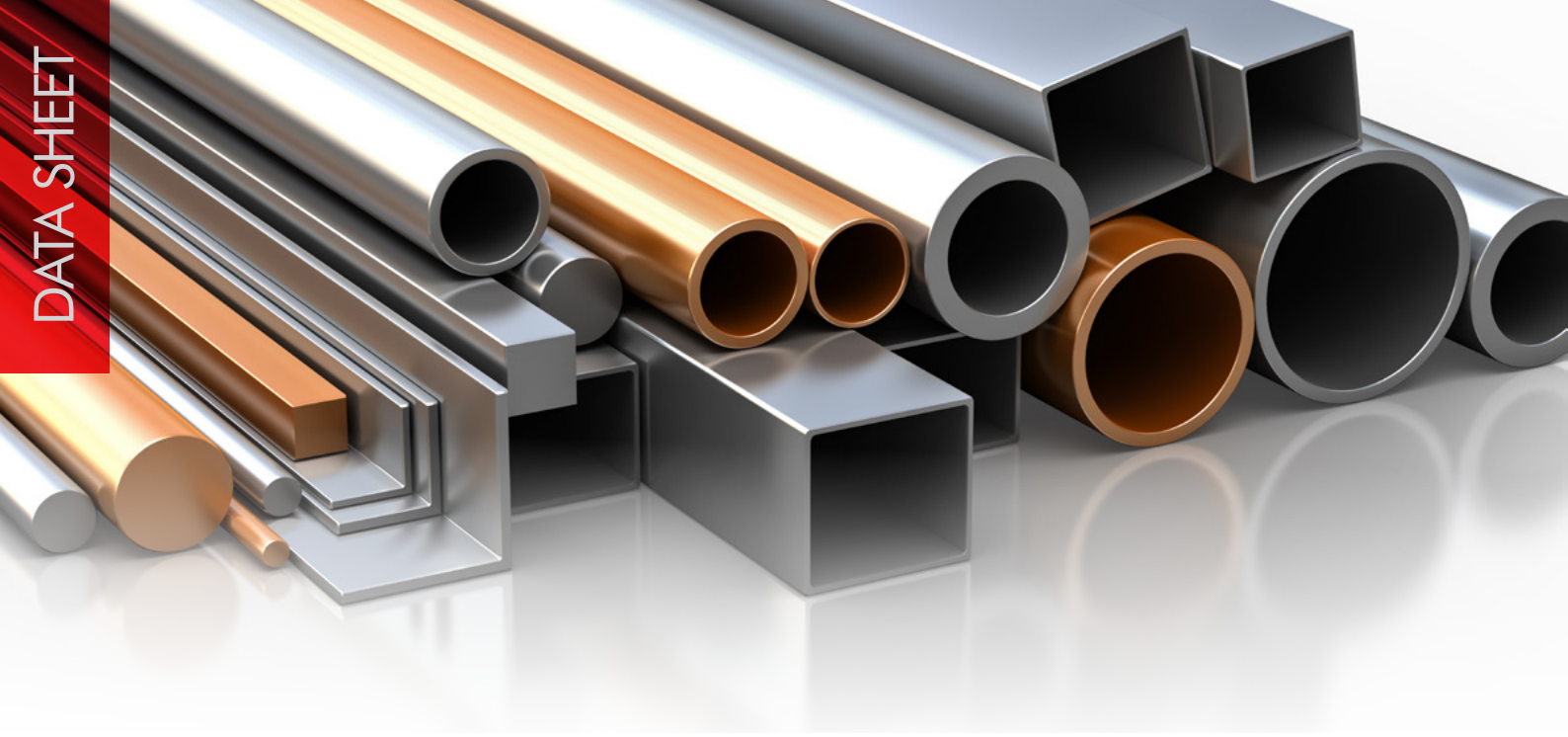
DATA SHEET



NITRONIC® 30

UNS No - S20400

NITRONIC 30 Stainless Steel offers essentially higher strength than Type 304 and potential for applications requiring good resistance to aqueous and atmospheric corrosion resistance joined with good toughness and economy. Tensilized NITRONIC 30 Stainless Steel has been utilized in fast transit structural where the strength-to-weight ratio of up to three times that of carbon steels have enhanced working proficiency. Rear frames of refrigerated trucks are effortlessly welded and formed from NITRONIC 30 Stainless Steel, resulting in protective units that can withstand impact blows without cracking. Shipboard container structural utilization of stainless steel effectively where carbon steel gets to be scuffed and rusts wherever the paint is harmed.

Applications

- Coal Buckets
- Hoppers
- Distributors
- Ore Separators
- Barge Liners
- Refrigerated Trucks
- Food Processing Equipment
- Bulk Solid Handling Equipment
- Sewage Treatment Structures
- Screens Hoppers
- Trailer Bed liners
- Chutes
- Truck/Bus Frames

Characteristics

- Highly impact-resistant
- Corrosion resistance
- Wet abrasion resistance

SUNMACH™
shaping exotic metals

NITRONIC® 30

Machining
Slow speeds, positive feeds and abundant resulfurized lubricant is significant to success in machining this alloy. Speeds and feeds are comparable to those employed with 316 or 317 stainless are appropriate here. Each and every unique machining practice can be utilized in this material. Chips will be tough and stringy and it is recommended these curlers or breakers are used.

Welding
This alloy is an austenitic, nitrogen strengthened steel joining corrosion resistance similar with 316 stainless steel and greater strength. It is promptly fabricated and remains non-magnetic even after severe forming operations.

Forging
Heat to 2000 F, soak to equalize, then heat to 2150 and equalize prior to forging.

Forming
With this material pre-heating is not required and all regular welding techniques including gas tungsten arc, gas metal arc and submerged arc are obtained. Filler metal selection should be of comparable chemistry for maximum strength and resistance to intergranular attack.

Annealing
Soak at 1900-2050 F, quench rapidly in air or water.

Hardening
Hardening this alloy requires cold working. It won't harden with exposure to thermal treatment.

NITRONIC® 30

Chemical Properties

C	Mn	P	S	Si	Cr	Ni	N
0.030	7.0 - 9.0	0.040	0.030	1.0	15.0 - 17.0	1.50 - 3.0	0.15 - 0.3

Mechanical Properties

Tensile Strength (ksi)	0.2% Yield Strength (ksi)	Elongation% in 2 inches
95	48	35

Physical Properties

Properties	Units	Temperature in °C
Density	7.862 g/cm^3	Room
Specific Heat	0.11 Kcal/kg.C	22°
Coefficient of Expansion	16.8 µm/m °C	20-100°

ASTM Specifications

Sheet / Plate
A 240

Availability

MANUFACTURING
Fasteners
Custom Machining
Custom Fabrication
Stamped Parts
Flanges

RAW MATERIALS
Sheets
Plates