

AL-6XN[®] GENERAL PROPERTIES

AL-6XN[®] (UNS N08367) is a 6 moly superaustenitic alloy containing higher levels of chromium, nickel, molybdenum, and nitrogen than 316L stainless steel. The alloying elements provide more corrosion resistance to acidic oxidizing chloride solutions, making AL-6XN resistive to pitting and crevice corrosion and stress corrosion cracking.

AL-6XN outperforms 316L—and is a cost-effective alternative to more expensive nickel-based alloys in applications where excellent formability, weldability, strength, and corrosion resistance are essential.

CHEMICAL REQUIREMENTS OF AL-6XN[®] (UNS N08367); WT. %

ELEMENT	UNS N08367
Carbon	0.03*
Manganese	2.00*
Phosphorous	0.04*
Sulfur	0.03*
Silicon	1.00*
Chromium	20.0–22.0
Nickel	23.5–25.5
Molybdenum	6.0–7.0
Nitrogen	0.18–0.25
Copper	0.75*
Iron	Balance (44)

*Maximum unless otherwise specified
Disclaimer: Always consult current standards.

PRODUCT FORMS AND MATERIAL STANDARDS

Corrosion resistant alloys are available in the most common product forms: plate, sheet, strip, bar, billet, wire, pipe, and tubing. The table to the right shows applicable ASME and ASTM material standards associated with the various alloy products forms.

COMMON SPECIFICATIONS FOR CORROSION RESISTANT ALLOYS

ALLOY FORM	AL-6XN ASME	AL-6XN ASTM
Plate, Sheet, and Strip	SA240 SB688	A240 B688
Rod, Bar, and Wire	SB691	B691
Welded Pipe	SB675	B675
Heat Exchanger Tubing	SA249	A249
Sanitary Tubing	-	A270
Welded Tubing (General Applications)	SB626	B626 A269
Seamless Pipe and Tubing	SB690	B690
Forged Pipe Flanges, Fittings, and Valves	SB462	B462
Wrought Nickel Alloy Welded Fittings	SB366	B366
Nickel Alloy Forgings	SB564	B564
Castings	SA351 CN-3MN UNS J94651	A743 A744
Bare Welded Rods and Wire	ERNiCrMo-10 UNS N06022	-

AL-6XN Properties/Specs REV 6/20