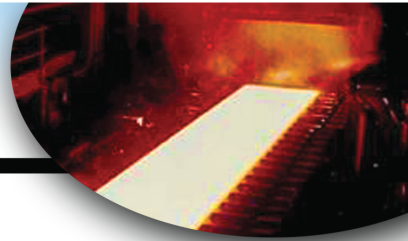




G.O. Carlson Plate



CARLSON ALLOY EC601 (UNS N06601) PRODUCT DATA BULLETIN

High tensile, yield and creep-rupture strengths for high temperature service. Not embrittled by extended exposure to high temperatures. Excellent resistance to stress corrosion cracking and to carburizing, nitriding and sulfur containing environments.

GENERAL PROPERTIES AND TYPICAL APPLICATIONS

Carlson Alloy EC601 is a nickel-chromium-iron alloy, developed specifically for high-temperature service. This alloy exhibits outstanding resistance to both cyclic and static oxidation at temperatures up to 2300°F (1260°C). It has good resistance to aqueous corrosion and high mechanical strength.

The high chromium and nickel content of EC601 provide a substantial degree of resistance to carburizing, nitriding and sulfur containing environments. The nickel-base also assures good resistance to stress corrosion cracking.

EC601 exhibits excellent tensile and yield strengths and good creep-rupture strength. It will not become embrittled by extended exposure to high temperatures.

APPLICATIONS:

Thermal Processing – baskets, trays and fixtures for annealing, carburizing, carbonitriding, nitriding and other heat treating applications: radiant tubes, muffles, retorts, flame shields and burner nozzles in industrial furnaces; furnace atmosphere generators; infrared radiant shields.

Chemical Processing – process heaters and insulating cans in ammonia reformers; combustion components and catalyst grid supports in nitric acid production; catalyst regenerators and air preheaters in polyethylene production.

Pollution Control – combustion chambers in solid-waste incinerators.

Power Generation – superheater tube supports, grid barriers and ash-handling systems.

Gas Turbines – containment rings.

CHEMICAL COMPOSITION (NOMINAL ANALYSIS, PERCENT)

Carbon, max.	0.10	Chromium	21.00 min. – 25.00 max.
Manganese, max.	1.00	Nickel	58.00 min. – 63.00 max.
Silicon, max.	0.50	Titanium	0.10 min. – 0.60 max.
Sulfur, max.	0.015	Aluminum	1.00 min. – 1.70 max.
Copper, max.	1.00	Iron*	Remainder
Boron, max.	0.006	*Element shall be determined arithmetically by difference.	

AVAILABLE PRODUCTS*

Plate	3/16" through 4" Widths to 108", lengths to 480" <i>For larger dimensions – inquire.</i>
Plate Products	cut bar, plasma cut or machined rings and discs, heads, rolled and tack-welded cylinders, and special cut shapes

* Bar, billet, ingot and master alloy pigs are available from: ELECTRALLOY, a G.O. Carlson Inc. company, 175 Main Street, Oil City, PA 16301 (800) 458-7273

MECHANICAL AND PHYSICAL PROPERTIES

Tensile Strength, psi, min.	80,000 (552 MPa)
Yield Strength (0.2% offset), psi, min.	30,000 (207 MPa)
Elongation in 2 in. (50.8 mm), or 4D, %, min.	35
Density, lb. per cu. in.	0.293
Melting Range, °F	2375-2495

SPECIFICATIONS

**ASME SB168
ASTM B168
ASM 5870**

Information in this product data bulletin is not intended for specification purposes. All data should be considered as typical or average, except when listed as minimum or maximum values.

The applications cited will allow a potential user to consider this Carlson alloy for a particular installation. But none of the information is to be construed as a warranty of fitness for any application.

As with all special-service materials, this alloy must be tested under actual service conditions to determine its suitability for a specific project.



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