

# ALLOY DATA SHEET CB-30

## CORROSION RESISTANT ALLOY

REVISION: 09/95

### DESCRIPTION

CB-30 is a non-hardenable, ferritic Fe-Cr-Ni alloy with good resistance to nitric acid, alkaline solutions and organic chemicals and food products. The alloy also has good oxidation and sulphidation resistance at temperatures up to 1400°F and is consequently used in the mineral processing industry.

### COMPOSITION

	<u>C</u>	<u>Mn</u>	<u>Si</u>	<u>Cr</u>	<u>Ni</u>	<u>P</u>	<u>S</u>
Min %				18.0			
Max %	0.30	1.0	1.50	21.0	2.0	0.04	0.04

### APPLICATIONS

Valve bodies and parts, shredders, furnace brackets and hangers, rabble arms and tube supports.

### PRODUCT FORMS

Horizontal and vertical centrifugal castings; static castings.

### PHYSICAL PROPERTIES

Density (lbs/in <sup>3</sup> )	0.272
Melting Point(°F)	2725
Thermal Conductivity (Btu/h/ft <sup>2</sup> /ft/°F)	12.8 @ 212°F 14.5 @ 1000°F
Thermal Expansion (10 <sup>-6</sup> in/in °F)	5.7 @ 70-212°F 6.5 @ 70-1000°F 6.7 @ 70-1300°F
Magnetic Permeability	Ferromagnetic

### MECHANICAL PROPERTIES (Typical Values at Room Temperature)

U.T.S.	K.S.I.	95	Annealed @1450°F, F.C. to1000°F, then A.C	ASTM Spec.A743 65 Min. 30 Min
Y.S.	K.S.I.	60		
Elong.	%	15		
Brinell	H B	195		
Key	ft-lbs	2		

**WELDABILITY**

CB-30 may be welded by the GMAW SMAW and GTAW processes, but is considered difficult to weld.

Electrodes 442

Preheat 600-800°F

Post weld heat treatment 1450°F min, Air Cool.

Procedures for welding CB-30 alloy are available from Kubota Metal Corporation.

**RELATED SPECIFICATIONS**

ASTM: A743(CB-30), J91803

Nearest wrought grade: AISI 442 or, AISI 431 if cast with chromium at the low end of the range and nickel at high end.

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