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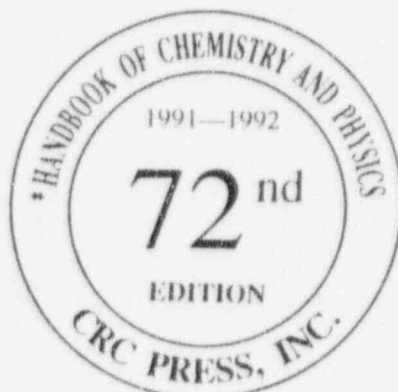
# CRC Handbook of Chemistry and Physics

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1991-92

A Ready-Reference Book of Chemical and Physical Data



Editor-in-Chief

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I.W. # - 153

CRC Press  
Boca Raton Ann Arbor Boston

690145

NUCLEAR REGULATORY COMMISSION

Docket No. 50-424/425-OLA-3 EXHIBIT NO. 4-153

In the matter of Georgia Power Co. et al., Vogtle Units 1 & 2

Staff  Applicant  Intervenor  Other

Identified  Received  Rejected Reporter SD

Date 10/6/95 Witness

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PDR ADOCK 05000424  
G PDR

COMMERCIAL METALS AND ALLOYS  
Miscellaneous Properties (Typical Values)

Common name and classification	Thermal conductivity			Density g/cm <sup>3</sup>	Coeff. of linear expansion, μ in./ in. °F	Electrical resistivity, microhm-cm	Modulus of elasticity, millions of psi	Approximate melting point °F
	W/cm K	Btu/hr ft <sup>2</sup> °F	cal/s cm K					
Ingot iron (included for comparison)	1.3	77	0.32	7.86	6.8	9	30	2800
Plain carbon steel	1.0	56	0.23	7.86	6.7	10	30	2760
AISI-SA 1020								
Stainless steel type 304	0.3	19	0.08	8.02	9.6	72	28	2600
Cast gray iron	0.8	48	0.20	7.2	6.7	67	13	2110
ASTM A48-48, Class 25								
Malleable iron				7.32	6.6	30	25	2250
ASTM A47								
Ductile cast iron	0.6	34	0.14	7.2	7.5	60	25	2100
ASTM A339, A395								
Ni-resist cast iron, type 2	0.7	41	0.17	7.3	9.6	170	15.6	2250
Cast 28-7 alloy (HID)	0.04	2	0.01	7.6	9.2	41	27	2700
ASTM A297-63F								
Hastelloy C	0.2	10	0.04	3.94	6.3	139	30	2150
Inconel X, annealed	0.3	17	0.07	8.25	6.7	122	31	2530
Haynes Stellite alloy 25 (L605)	0.2	10	0.04	9.15	7.61	88	34	2500
Aluminum alloy 3003, rolled	2.8	164	0.68	2.73	12.9	4	10	1300
ASTM B221								
Aluminum alloy 2017, annealed	3.0	174	0.72	2.8	12.7	4	10.5	1100
ASTM B221								
Aluminum alloy 380	1.8	102	0.42	2.7	11.6	7.5	10.3	1050
ASTM SC84B								
Copper	4.0	230	0.96	8.91	9.3	1.7	17	1900
ASTM B152, B124, B133, B1, B2, B3								
Yellow brass (high brass)	2.2	126	0.52	8.47	10.5	7	15	1740
ASTM B36, B134, B135								
Aluminum bronze	1.3	75	0.31	7.8	9.2	12	17	1900
ASTM B169, alloy A; ASTM B124, B150								
Beryllium copper 25	0.2	12	0.05	8.25	9.3	-	19	1700
ASTM B194								
Nickel silver 18% alloy A (wrought)	0.6	34	0.14	8.8	9.0	29	18	2030
ASTM B122, No. 2								
Cupronickel 30%	0.5	31	0.13	8.95	8.5	35	27	2240
Red brass (cast)	1.3	77	0.32	8.7	10	11	13	1820
ASTM B30, No. 4A								
Chemical lead	0.6	36	0.15	11.35	16.4	21	2	471
Antimonial lead (hard lead)	0.5	31	0.13	10.9	15.1	23	3	534
Solder 50-50	0.8	48	0.20	8.89	13.1	15	-	430
Magnesium alloy AZ31B	1.4	82	0.34	1.77	14.5	9	6.5	1600
K Monel	0.3	19	0.08	8.47	7.4	58	26	2430
Nickel	1.1	63	0.26	8.89	6.6	10	30	2625
ASTM B160, B161, B162								
Cupronickel 55-45 (Constantan)	0.4	24	0.10	8.9	8.1	49	24	2300
Commercial titanium	0.3	19	0.08	5	4.9	80	16.5	3000
Zinc	1.2	70	0.29	7.14	18	6	-	780
ASTM B69								
Zirconium, commercial	0.3	19	0.08	6.5	2.9	41	12	3300