Zinc, Zn

Categories: Metal; Nonferrous Metal; Zinc Alloy; Pure Element

Material Notes: **Applications:** corrosion protection (galvanization), architectural, automotive, batteries, toys.

This entry is for pure Zn. A wide range of zinc alloys is also included in MatWeb.

Key Words: EN 988 (Min. 99.99%) is a common sheet spec.

Vendors: No vendors are listed for this material. Please click here if you are a supplier and would like information on how to add your listing to this material.

Physical Properties	Metric	English	Comments
Density	7.10 g/cc	0.257 lb/in³	

Chemical Properties	Metric	English	Comments
Atomic Mass	65.39	65.39	1995
Atomic Number	30	30	
Thermal Neutron Cross Section	1.06 barns/atom	1.06 barns/atom	
X-ray Absorption Edge	1.283 Å	1.283 Å	K
	10.33 Å	10.33 Å	L_I
	11.8395 Å	11.8395 Å	L_{II}
	12.1055 Å	12.1055 Å	L_{III}
Electrode Potential	-0.760 V	-0.760 V	
Electronegativity	1.65	1.65	Pauling
Ionic Radius	0.740 Å	0.740 Å	Crystal Ionic Radius for Valence +2
	0.880 Å	0.880 Å	Crystal Ionic Radius for Valence +1
Electrochemical Equivalent	1.219 g/A/h	1.219 g/A/h	

Mechanical Properties	Metric	English	Comments
Hardness, Vickers	30	30	
Tensile Strength, Ultimate	37.0 MPa	5370 psi	cast sample
Modulus of Elasticity	96.5 GPa	14000 ksi	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.000005916 ohm-cm	0.000005916 ohm-cm	
Magnetic Susceptibility	-1.74e-7	-1.74e-7	cgs/g
Critical Magnetic Field Strength, Oersted	53.97 - 54.03	53.97 - 54.03	
Critical Superconducting Temperature	0.840 - 0.860 K	0.840 - 0.860 K	

Thermal Properties	Metric	English	Comments
Heat of Fusion	110 J/g	47.3 BTU/lb	
Heat of Vaporization	1754 J/g	754.6 BTU/lb	
CTE, linear	31.2 µm/m-°C @Temperature 20.0 - 100 °C	17.3 µin/in-°F @Temperature 68.0 - 212 °F	
Specific Heat Capacity	0.3898 J/g-°C	0.09316 BTU/lb-°F	
Thermal Conductivity	112.2 W/m-K	778.7 BTU-in/hr-ft²-°F	
Melting Point	419.58 °C	787.24 °F	
Boiling Point	907 °C	1660 °F	

Optical Properties	Metric	English	Comments
Emissivity (0-1)	0.050 @Temperature 300 °C	0.050 @Temperature 572 °F	unoxidized or oxidized

Component Elements Properties	Metric	English	Comments
Zinc, Zn	100 %	100 %	

Descriptive Properties	
CAS Number	7440-66-6

References for this datasheet.