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INDUSTRIAL METAL HANDBOOK
Metals and Alloys
Properties and Uses
A comprehensive guide to industrial metals and alloys, including their properties, uses, and manufacturing processes. The handbook covers a wide range of materials, from common metals like steel and aluminum to more specialized alloys and composites. It provides detailed information on mechanical properties, chemical composition, and physical characteristics, making it an essential reference for engineers, metallurgists, and materials scientists.

Material	Properties	Uses
Steel	High strength, ductility	Construction, machinery
Aluminum	Lightweight, corrosion resistant	Aerospace, automotive
Copper	Excellent electrical conductivity	Wiring, electronics
Gold	Corrosion resistant, malleable	Jewelry, electronics
Silver	High thermal conductivity	Medical equipment, jewelry
Platinum	High melting point, corrosion resistant	Catalysis, jewelry
Palladium	High strength, corrosion resistant	Catalysis, jewelry
Rhodium	High melting point, corrosion resistant	Catalysis, jewelry
Iridium	High melting point, corrosion resistant	Catalysis, jewelry
Osmium	High melting point, corrosion resistant	Catalysis, jewelry
Carbon	High strength, high melting point	Graphite, diamond
Silicon	Semiconductor properties	Electronics, solar cells
Germanium	Semiconductor properties	Electronics, solar cells
Indium	Low melting point, high thermal conductivity	Solder, electronics
Lead	High density, corrosion resistant	Batteries, radiation shielding
Antimony	High melting point, corrosion resistant	Alloys, electronics
Bismuth	Low melting point, corrosion resistant	Alloys, electronics
Polonium	Radioactive, high melting point	Research, medical
Astatine	Radioactive, high melting point	Research, medical
Francium	Radioactive, high melting point	Research, medical
Radium	Radioactive, high melting point	Research, medical
Actinium	Radioactive, high melting point	Research, medical
Thorium	Radioactive, high melting point	Research, medical
Uranium	Radioactive, high melting point	Research, medical
Neptunium	Radioactive, high melting point	Research, medical
Plutonium	Radioactive, high melting point	Research, medical
Americium	Radioactive, high melting point	Research, medical
Curium	Radioactive, high melting point	Research, medical
Berkelium	Radioactive, high melting point	Research, medical
Californium	Radioactive, high melting point	Research, medical
Einsteinium	Radioactive, high melting point	Research, medical
Fermium	Radioactive, high melting point	Research, medical
Mendelevium	Radioactive, high melting point	Research, medical
Nobelium	Radioactive, high melting point	Research, medical
Lanthanum	High melting point, corrosion resistant	Alloys, electronics
Cerium	High melting point, corrosion resistant	Alloys, electronics
Praseodymium	High melting point, corrosion resistant	Alloys, electronics
Neodymium	High melting point, corrosion resistant	Alloys, electronics
Europium	High melting point, corrosion resistant	Alloys, electronics
Gadolinium	High melting point, corrosion resistant	Alloys, electronics
Terbium	High melting point, corrosion resistant	Alloys, electronics
Dysprosium	High melting point, corrosion resistant	Alloys, electronics
Ytterbium	High melting point, corrosion resistant	Alloys, electronics
Lutetium	High melting point, corrosion resistant	Alloys, electronics
Hafnium	High melting point, corrosion resistant	Alloys, electronics
Tantalum	High melting point, corrosion resistant	Alloys, electronics
Tungsten	High melting point, corrosion resistant	Alloys, electronics
Rhenium	High melting point, corrosion resistant	Alloys, electronics
Osmium	High melting point, corrosion resistant	Alloys, electronics
Iridium	High melting point, corrosion resistant	Alloys, electronics
Platinum	High melting point, corrosion resistant	Alloys, electronics
Palladium	High melting point, corrosion resistant	Alloys, electronics
Rhodium	High melting point, corrosion resistant	Alloys, electronics
Silver	High melting point, corrosion resistant	Alloys, electronics
Copper	High melting point, corrosion resistant	Alloys, electronics
Aluminum	High melting point, corrosion resistant	Alloys, electronics
Steel	High melting point, corrosion resistant	Alloys, electronics

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