List of Overmolding Metals and Alloys

The following materials are selected for overmolding based on their specific properties to suit various applications in industries like electronics, aerospace, automotive, and more.

Metal/Alloy	Properties	Common Uses
Aluminum	Lightweight, Corrosion Resistant	Electronics, Automotive
Stainless Steel	Durable, Corrosion Resistant	Kitchenware, Medical Devices
Copper	High Conductivity	Electrical Wiring, Electronics
Brass	Good Machinability, Corrosion Resistant	Decorative Items, Gears
Bronze	Strength, Corrosion Resistant	Marine Hardware, Bearings
Nickel Silver	Strength, Good Conductivity	Musical Instruments, Decorative Items
Zinc	Low Cost, Durable	Die Casting, Automotive
Titanium	High Strength, Lightweight	Aerospace, Medical Implants
Magnesium	Very Lightweight, High Strength	Automotive Components, Aerospace
Lead	High Density	Batteries, Radiation Shielding
Pewter	Low Melting Point, Malleable	Decorative Items, Jewelry

Invar	Low Thermal Expansion	Precision Instruments
Kovar	Thermal Expansion Similar to Glass	Hermetic Seals, Electronics
Monel	Corrosion Resistant, Strong	Chemical Processing Equipment
Hastelloy	High-Temperature Strength	Chemical Processing
Inconel	High-Temperature Strength, Corrosion Resistant	Aerospace, Chemical Processing
Nitinol	Shape Memory, Superelasticity	Medical Devices, Eyeglass Frames
Tungsten	High Density, High Melting Point	Electronics, Aerospace
Molybdenum	High Melting Point, High Strength	Electronics, Industrial Applications
Beryllium Copper	High Conductivity, Strength	Connectors, Switches

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