M2 High-Speed Steel (HSS) is the global industry standard material grade for general-purpose industrial drill bits. It is a tungsten-molybdenum-based tool steel known for its highly balanced mix of **hardness, toughness, and wear resistance**. [1, 2]

Key Material Specifications

- **Hardness:** Typically reaches **62–65 HRC** after proper vacuum heat treatment.
- **Red Hardness:** Maintains its rigid cutting edge at elevated temperatures up to **600°C**, preventing rapid dulling during high-speed production.
- **Alloy Composition:** Contains approximately 6.5% Tungsten (W), 5% Molybdenum (Mo), 4% Chromium (Cr), and 2% Vanadium (V).

Target Applications

M2 drill bits are versatile and perform exceptionally well on the following materials: [

- **Metals:** Mild steel, carbon steel, alloy steel, cast iron, brass, copper, and aluminium.
- **Non-metals:** Hardwoods, plastics, PVC, and fiberglass.
- *Note: For heavy-duty drilling in tough stainless steel or titanium, an upgrade to cobalt-alloyed steel like M35 is generally recommended.*