








This guide will help you find a drill that's well suited to your application. To begin, identify the workpiece material from the materials groups listed below:

Color Code	Material Guide (Chemical Description or ANSI standard)	Page
	General Steels, Brass, Copper 1035, 1213, 12L13, 11L08, 1015, 1038, 1018	40
	Alloyed Steels, Nitrided Steels, Case Hardened Steels S1, 4140, 4150, 4137, 4135	44
	Stainless and Acid-Resistant Steels 316, 321, 316Ti, 410, 420	48
	Tool Steels, High-Tensile Steels, Hardened Materials D1, H13, H21, O2, M2, W110, 4130, 1045, 1060	52
	Aluminum and Aluminum Alloys Al99, AlMn1Mg0.5, AlCuMgPb, AlZnMgCu1	56
	Cast Iron No35B, No45B, No55B, 60-40-18, 80-55-06, 50005, 70003	60
	Titanium and Ti-Alloys, Aerospace Materials, Nickel-Based Alloys 5390A, Titanium, TiAl6V4, TiCu2, Nimonic, Inconel, Hastelloy, Waspaloy	64

Next, look for the color code associated with your workpiece material on the following pages. On the color-corresponding page will be a listing of the most popular drills for that material, arranged by drill length. Choose the drill series that most closely fits your application, and follow the column down to the listing of the page number that will display the full diameter range for that drill series.

Looking for a different substrate/coating combination, or other changes in options offered in this catalog? Contact our Specials department to learn about Guhring's extensive capabilities in producing special tooling to fit your needs.