

CARBIDE

Greenleaf offers a comprehensive line of carbide inserts in grades ranging from sub-micron C-1 through C-8 classifications. An industry pioneer in coated carbide, Greenleaf offers a variety of uncoated, CVD-coated and PVD-coated grades. Carbide inserts are available in ANSI standard geometries with multi-purpose chip-breakers for heavy roughing through finishing.

COATED – CVD

GA-5022 A general-purpose CVD-coated grade designed for turning and milling cast iron at high speeds and moderate feed rates. Developed to handle medium roughing to finishing operations. GA-5022 delivers high wear-resistance characteristics and medium resistance to mechanical shock.

GA-5023 A high-speed performance grade for turning and milling cast iron. GA-5023 features an advanced MT-CVD coating specifically developed for abrasive wear resistance. Application ranges from roughing to finishing on most cast iron materials including gray iron, ductile, nodular and other alloyed irons. The high wear and shock resistance of GA-5023 allows machining at high speeds and a variety of feeds.

GA-5025 A high-speed CVD-coated grade for turning, light roughing and finishing of carbon and alloy steels, as well as selected stainless steels.

GA-5026 A high-speed grade developed for turning nickel- and cobalt-based super-alloys, stainless steels, and refractory metals. The advanced MT-CVD coating over a micro-grain substrate offers high wear resistance. GA-5026 has exceptional resistance to the notching and deformation common to machining high strength materials. Apply at high speeds and light feeds in turning and selected milling applications.

GA-5035 A high-performance CVD-coated grade for turning all types of steels, and selected stainless steels. GA-5035 can be used in rough, semi-finish, and finish turning situations requiring resistance to heat deformation, thermal shock, and abrasion. GA-5035 should be applied at high speeds and a range of feeds.

GA-5036 A high-performance CVD-coated grade for milling steels at high speed. GA-5036 should be used when milling forged and cast steels and selected ductile irons. GA-5036 has a unique combination of toughness and heat resistance making it suitable for heavy and light duty milling at high cutting speeds.

GA-5040 A tough CVD-coated grade for low-speed, high-feed milling of carbon and alloy steels, and cast irons. Other applications for GA-5040 include milling and interrupted turning of stainless steel and selected high-temp alloys. This multi-layer CVD-coated grade excels in severe machining applications requiring resistance to mechanical shock.

COATED – PVD

G-910 PVD-coated grade for milling high-temp alloys, stainless steel, and low carbon steels. G-910 is a medium-speed grade and should be applied at moderate to high feed rates.

G-915 Multi-layer PVD-coated grade, excellent for milling and turning high-temp alloys, stainless steel, and low carbon steels. The multi-layer PVD coating adds heat and abrasion resistance to the tough, shock-resistant substrate. G-915 should be run at moderate speeds and moderate to high feeds in milling and interrupted turning applications.

G-920 PVD-coated grade for turning and milling high-strength materials such as high-temp alloys, titanium and stainless steel. G-920 is also an excellent grade for aluminum and refractory metals. This grade has the resistance to deformation and notching required for higher speeds than G-910.

G-925 Multi-layer PVD-coated grade specifically designed for machining abrasive and difficult-to-machine materials. Typical applications include high-temp alloys, titanium and other refractory metals, stainless steel, and many cast irons. G-925 exhibits excellent resistance to notching and deformation. Apply at moderate to high speeds and moderate feeds.

G-935 Multi-layer PVD-coated grade for steel milling and turning applications requiring additional resistance to mechanical and thermal shock. The multi-layered PVD coating increases the speed capability and wear resistance in tough milling and interrupted turning applications.

G-955 Multi-layer PVD-coated grade especially designed to handle high productivity milling of rough steel forgings, primarily tool steels. Additionally, G-955 provides excellent tool life in semi-finishing and finishing operations where toughness and abrasion resistance is needed.

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UNCOATED

G-01 Developed for milling high-temp alloys, stainless steel, and low-carbon steels at low speeds and moderate to high feeds. Also can be used for turning in the same application range on severe interruption or old machinery.

G-01M A tough, sub-micron grade used for milling and roughing austenitic stainless steels, and stainless steel castings – even when rolling or casting skin is present. The edge strength of G-01M allows the use of sharp edges, high positive rakes, and intermittent cuts.

G-10 For roughing all cast irons under severe conditions, including broaching. The edge strength of G-10 makes it a good choice for roughing high-temp alloys with positive rakes and machining non-ferrous materials when toughness is of prime importance. Apply at moderate speeds and feeds.

G-02 An excellent general-purpose cast iron grade. G-02 can be applied to milling and turning cast iron at moderately high speeds and medium feeds. G-02 is also a good choice for machining aluminum with positive rakes, and light roughing of some high-temp alloys and stainless steels.

G-20M A sub-micron C-2 carbide grade suited for use in turning and milling titanium and nickel-based super-alloys. G-20M has the strength and edge wear characteristics to resist notching when turning high-strength materials.

G-23 A finishing grade for all cast irons and other short-chipping non-ferrous materials, such as brass and bronze. Apply at moderately high speeds and moderate feed rates.

G-40 Finish turning of cast iron and other hard-wearing materials at high speeds and light feeds in good conditions.

G-50 Heavy roughing grade for steel and steel castings under difficult conditions, and ferritic stainless steels in most applications. G-50 is tough enough to enable the use of positive rakes for turning.

G-53 Excellent general-purpose milling grade for steel and steel alloys at moderate speeds and feeds. Good combination of toughness and wear resistance for milling, or as an all-around grade for mixed production applications. G-53 is not recommended for continuous turning.

G-60 Heavy rough turning of steel, steel castings, and steel forgings. Apply G-60 at moderate speeds and heavy feed rates and depths of cut. More wear resistant than G-50, but lower in toughness.

G-70 Finishing of steel and steel castings under favorable conditions. G-70 is an excellent finish-milling grade. Apply at high speeds and low to moderate feeds. Offers superior wear resistance when dry machining alloy steels.

G-74 Roughing or finishing grade for steel and steel castings. G-74 has higher shock resistance than G-70, and should be applied at high speeds and moderate to heavy feeds. Well suited for turning of steel rolls.

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