

General Brush Block Information

Metal	STAINLESS STEEL	SILVER
Color	Shiny Silver	Silver
Magnetic	Yes & No	No
Melting Point (Deg F)	2600	1763
Description	<p>Stainless Steel is one of the most durable metals. The minimum 12 percent chromium contained in stainless steel forms an invisible, protective, corrosion-resistant passive film on the surface. Some types of stainless steel will retain its original appearance with no corrosion.</p> <p>Some types of stainless steel most commonly used are 430, 304 and 316. Type 430 and other 400 - series stainless steels are magnetic. Types 304, 316 and other 300-eries stainless steels are not magnetic and can be strengthened by cold work. Stainless-steel can be heated and cooled in a process called "annealing." This is also called "dead soft" condition. Use in higher loads or impact, "cold working" can be an economical means of reducing weights and increasing strength. Type 430 has little potential for corrosion. Type 304 is mainly used with low humidity and temperatures. Type 316 is used when a more corrosion-resistant stainless steel is needed.</p>	<p>Silver that has been fully work-hardened, either by rolling or forging, gradually recrystallizes, even at room temperature. This greatly softens the metal, making it susceptible to scratching and marring. To maintain hardness, therefore, other metals are added to form alloys that are harder, stronger, and less prone to fatigue. The best-known copper-silver alloy is sterling, which is 92.5 percent silver and 7.5 percent copper. Coin silver is an alloy of 90 percent silver and 10 percent copper. Jewelry and ornaments, 85-90 percent silver (and the balance copper) is frequently used. Dental alloys of 60-70 percent silver, 18-25 percent tin, 2-14 percent copper, and 0.5-2 percent zinc are amalgamated with varying quantities of mercury to form the filling materials for cavities in teeth.</p> <p>Silver and alloys of silver and copper, although stable in air, tarnish in the presence of sulfur. In order to improve tarnish resistance, up to 40 percent palladium is added. In order to obtain the luster and corrosion resistance of silver on other metals and alloys, silver electroplating is practiced. Cyanide-based baths are most commonly employed. Because silver has the highest electrical conductivity of all metals, it is used in alloyed form for electrical contacts.</p> <p>Silver brazing fillers are the most frequently used precious-metal fillers. They are suitable for brazing nearly all steels and nonferrous metals except aluminum, magnesium and titanium. A typical brazing alloy composition is 50 percent silver, 34 percent copper, and 16 percent zinc. Plumbing is a one place brazing is used.</p>

Metal	BRASS	COPPER
Color	Yellow Metallic	Reddish Brown
Magnetic	No	No
Melting Point (Deg F)	1706	1985
Description	<p>An alloy of 70% copper and 30% zinc. This material has fair to excellent corrosion resistance depending on the contact agents chemistry. It has excellent cold workability and good hot formability.</p>	<p>Copper is one of the most important metals. Copper is reddish with a bright metallic luster. It is soft, pliable, and a good conductor of heat and electricity (second only to silver in electrical conductivity). Its alloys, brass and bronze, are very important. Apparently the reason that policemen in the USA are nicknamed "cops" or "coppers" is to do with their uniforms with used to have copper buttons.</p>

Metal	ALUMINUM ALLOY	CARBON STEEL
Color	Silvery White	
Magnetic	No	Yes
Melting Point (Deg F)	865-1240	2800
Description	<p>It is light, nontoxic (as the metal), nonmagnetic and non-sparking. It is easily formed machined, and cast. A key property is low density. Aluminum is only one-third the weight of steel. Aluminum and most of its alloys are highly resistance to most forms of corrosion. The metal's natural coating of Aluminum oxide provided a highly effective barrier to air, temperature, moisture and chemical attack.</p> <p>Aluminum is a superb conductor of electricity. Aluminum is non-magnetic and non-combustible.</p> <p>Other valuable properties include high reflectivity, heat barrier properties and heat conduction. The metal is malleable and easily worked by the common manufacturing and shaping processes.</p>	<p>Carbon steel is a metal, a combination of two elements, iron and carbon, where other elements are present in quantities too small to affect the properties. With a low carbon content it has the same properties as iron, soft but easily formed. As carbon content rises the metal becomes harder and stronger but less pliable. Typical compositions of carbon are: *Mild steel .10% to .25%, *Medium carbon steel .25% to .45% High carbon steel .45% to .95%. Very high carbon steel .95% to 2.1%. Steel with sufficient carbon compositions can be heat-treated, allowing parts to be fabricated in an easily-formula soft state then made harder for structural applications. Steels are often wrought by cold working methods, which is the shaping of metal through deformation at a low equilibrium or metastable temperature.</p>

Metal	BRONZE	STEEL
Color	Yellow	
Magnetic	No	Yes
Melting Point (Deg F)	2000	
Description	<p>Phosphor bronze is a copper based material primarily used as spring material with good strength, formability and corrosion resistance.</p>	<p>Steel is a metal alloy whose major component is iron, with carbon being the primary alloying material. Carbon acts as a hardening agent, preventing iron atoms, which are naturally arranged in a lattice, from sliding past one another. Varying the amount of carbon and its distribution in the alloy controls the qualities of the resulting steel. Steel with increased carbon content can be made harder and stronger than iron, but is also more brittle. One classical definition is the steels are iron.</p>

Material	Delrin	HDPE
Color	Black	
Magnetic	No	No
Melting Point (Deg F)	347	-35°C to +65°C (Working Temperture)
Description	<p>Delrin (Homopolymer) is an acetal homopolymer made by DuPont. It is characterized as having an excellent combination of physical properties that make it suitable for numerous applications. With low moisture absorption and a low coefficient of friction, Delrin is uniquely tailored for wear applications in high humidity or moisture environments. Delrin will maintain constant physical properties under high moisture conditions and out-perform nylon in bearings under these conditions.</p>	<p>High Density Polyethylene (HDPE) is a rugged material which is easy to mold, has a high resistance to impact and is not affected by most chemicals. Principally used in injection and blow molding it may also be vacuum formed or extruded.</p>