



FINTEC
METAL FINISHING TECHNOLOGY

Selecting Blasting Media for Etching, Cleaning, Stripping & Polishing

It is important to know the differences in blasting media, since different abrasive blasting media are required for different applications. Blasting media can be used for purposes such as cleaning, stripping, etching, strengthening and polishing and deburring. In addition to the media type, grit or mesh size is another factor to consider for your application. The final choice of media depends on the nature of the work required and on the blasting equipment that is utilized. The blasting media selection guide below contains a list of the common blasting media and the differences in blasting media.

Aluminum Oxide

Aluminum oxide is the most widely used abrasive in blast finishing and surface preparation industry. Aluminum oxide is produced by melting abrasive grade bauxite for brown aluminum oxide or alumina for white aluminum oxide. Aluminum oxide is an extremely sharp, long-lasting blasting abrasive that can be recycled 8-13. Aluminum oxide is available in the standard brown as well as 99.5% pure white grades. Bulk Density 2.15 -1.61 g/cc (grit 6-220); MOHS Hardness 8 -9; Grit size range 6-240 and Powders 240-1200; Angular shape.

Crushed Glass Grit

The angular nature of crushed glass grit allows for aggressive surface profiling and removal of coatings and surface contamination. Crushed glass grit contains no free silica, is non-toxic and inert and contains no heavy metals typically found in coal and copper slags. Since crushed glass grit is lighter than many slags up to 50% less media can be used. Bulk Density 80-85; Hardness 5-6; Grit size range-Coarse to Extra Fine; Angular shape; Consumable.

Glass Beads

Manufactured from lead-free, soda lime-type glass, containing no free silica, glass beads are manufactured into preformed ball shapes. Glass beads produce a much smoother and brighter finish than angular abrasives. Glass beads can be recycled approximately 8-12 times depending on blast pressure being utilized. Bulk Density 85-90; Hardness 5-6; Grit size range 10-400; Round shape.

Silicon Carbide

As the hardest blasting media available, silicon carbide is has a very fast cutting speed. Manufactured to a blocky grain shape that splinters, silicon carbide grit can be recycled many more times that other blasting media. The hardness of silicon carbide is ideal for etching of glass and stone and is the preferred abrasive for blasting prior to brazing. Bulk Density 1.48 -1.38 g/cc (grit 6-220); MOHS Hardness 9.5; Grit size range 6-240 and Powders 240-1200; Angular shape.

Plastic Abrasive

Plastic abrasives are available in a variety of types that deliver quick stripping rates and consistent performance. This media is ideal for stripping coatings and paint from substrates, including aluminum and other delicate metals, composites and plastics. The relative softness of plastic abrasive media makes it ideal for automotive and aerospace blasting applications. Friability low/medium; Hardness 3-4; Grit size range 12-80; Soft, angular shape; Urea, Melamine, Acrylic compositions.

Pumice

Pumice is a light, natural mineral that is used chiefly as a mild abrasive. Pumice is ideal for less aggressive operations where protection of the surface is of supreme importance. Hardness 6-7; Grit size range 14-325+

Steel Shot

Blasting with steel shot is a popular method for cleaning, stripping and improving a metal surface. Steel shot is manufactured into a round ball shape that results in a smooth and polished surface. The peening action of the steel shot produces improved compressive strength to metal surfaces. Bulk Density 280-300; Hardness 40-51 HRC; Grit size range S-70 to S-780; Spherical shape.

Steel Grit

High-demand, aggressive applications are ideal for steel grit. Steel grit offers a very fast stripping action for many types of surface contaminants from steel and other foundry metals. Softer than aluminum oxide but still angular in shape, steel grit will not fracture as easily making it perfect for creating an etched surface on metal. Bulk Density 230; Hardness 40-60 HRC; Grit size range G-12 to G-80; Angular shape.

Corn Cob

Corn cob is an organic, soft blasting grit that is safe for delicate parts and soft substrates. As the preferred blasting media for log homes and other wood surfaces, corn cob offers excellent cleaning and stripping properties without damage to the substrate. Cob is often used for paint and adhesive removal on composites. Hardness 3-4; Grit size range Extra Coarse to Extra Fine; Ground, Angular shape.

Walnut Shell

Walnut shell grit is used for applications that require aggressive stripping or cleaning without damage or effect on the underlying substrate. Organic and biodegradable, walnut shell is extremely durable, angular in shape but is considered a soft abrasive. Walnut shell sees utility in applications such as cleaning hard woods and aircraft and automotive stripping. Hardness 4.5-5; Grit size range Extra Coarse to Extra Fine; Angular shape.

Garnet

Garnet is naturally occurring and is used for many blasting applications as well as being a cutting agent in Water Jet machines. Garnet is hard and fractures quickly leaving a sharp edge. Garnet can be recycled through a blast system 2- 2.5 passes. Bulk Density ranges from 130-145; Hardness 7. Garnet cost less than many other abrasives and is widely used for cleaning, finishing, and etching in applications that do not require multiple passes through a nozzle.