The Ultimate Guide to Faqs: S170 Steel Shot

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S170 steel shot, also known as high-speed Steel (HSS), is a low-carbon wrought alloy that contains chromium and tungsten. S170 steel shot is used for metalworking applications where it forms extremely hard outer layers; this prevents the core from wearing out quickly. It's considered advanced tooling material as opposed to traditional HSS. The material hardens at about half the temperature of regular high-speed Steel, which means it can be used with many more machines. Many of these applications involve metal bending, boring, or grinding operations - and the S170 steel shot's composition allows it to withstand extreme amounts of stress. Today we'll be going over some of the most common uses for S170 steel shot and S170 steel shot advantages over conventional HSS.

What is S170 Steel Shot?

What is S170 Steel Shot?

S170 is a steel shot used as the raw material for manufacturing various industrial abrasives. S170 steel shot has a hardness of over 45 HRC and a density of 7.8g/cm3. It is spherical, has no cracks or crevices, no impurities, good toughness, and has high cleaning power.
Definition
S170 steel shot refers to the abrasive corn diameter of 0.011 inches (0.28 mm). Commonly used for surface treatment and other purposes.
Advantages
S170 steel shots have many advantages, including:
1) High hardness (above HRC45) provides a high rate of removal compared to other types of media
2) Uniform microstructure provides uniform wear characteristics, reducing production costs
3) Prolonged life expectancy reduces media consumption and operating costs
4) Spherical shape ensures maximum performance at low wear rates and low dust generation
5) The low carbon content prevents the formation of excessive heat during blasting, avoiding contamination and decarburization
6) Free from impurities such as sulfur, phosphorus, or heavy metals that may cause rusting or burning during processing

Industrial Applications

The S170 type of Steel shot is an ideal choice for blasting applications in many.

S170 Steel Shot Price

The price of the S170 steel shot is affected by the raw material cost, energy cost, labor costs, waste management, etc. These factors are different in each country. Therefore, the price of steel shots is

also different. However, the price of steel shot is generally between $0.35 and $0.45 per kilogram.

S170 Steel Shot Vs. 410 Shot – Which One is Better?

S170 and 410 are both steel shots. However, there is a difference between the two types of steel shots. S170 is more resistant than 410 steel shot. S170 has a higher hardness and is heavier than 410, but it has less elasticity. In general cases, S170 is used as a softer material that can withstand high temperatures, while 410 is used in areas with lower temperatures, such as shooting houses. Four hundred ten shots are also used for hunting small birds. It is considered one of the most popular ammunition for hunting small birds because it has a higher velocity and greater penetration power. The biggest advantage of 410 shots over other types of ammunition is that they are very lightweight and can be carried easily in your gun case or backpack.

What is S170 Steel Shot, and How Does It Relate to Shotgun Chokes?

A: **S170 steel shot** is considerably harder than lead. It measures about 170 on the Brinell hardness scale. This is because it has much more carbon in it than lead does. The extra carbon makes the shot harder, so it will resist deforming when fired at high velocity from a shotgun barrel.
The harder shot also slows down the wear of the bore of a shotgun barrel. That's important because bores that the repeated firing of lead shots has worn out will not shoot Steel well. They'll tend to "spread" the pattern too much, and you won't be able to hit with any consistency. I've found this to be especially true with old double guns that have been used for lots of hunting over many years.
When steel shot was first introduced, there were problems with it breaking apart when fired through some chokes. It was discovered that constricting the muzzle of a shotgun barrel too tightly caused the hard pellets to shatter or break apart when they left the muzzle. A new system of choke designations was created for shotguns using steel shotshells to solve this problem.

S170 Steel Shot Properties, Information, and Specifications

Steel Shot Properties:
- Nominal Density (g/cc): 7.80 g/cc (0.280 lb/in³)
- Hardness: 50 HRC
- Tensile Strength (PSI): 160,000 psi
- Vickers Hardness: 470 HV30
- Rockwell Hardness: 50 Rc
- Modulus of Elasticity: 28.5 Mpsi (200 GPa)

Material Information:
- Iron Alloy ASTM A031305A (SAE J434C)
- Chemical Composition (%) Carbon: 0.40 - 0.50% Manganese: 0.60 - 1.00% Phosphorous: 0.035 Max% Sulfur: 0.04 Max% Silicon: 1.00 Max% Chromium: 0.25 - 0.45% Nickel: 2.00 - 2.75% Molybdenum: 0.20 - 0.35% Copper: 1.50 - 2.00% Vanadium: 0.15 - 0.35% Mechanical Properties*: As Cast / As Forged / Annealed Diameter Range Minimum Tensile Strength (PSI)

S170 Steel Shot Specifications

Diameter: 0.115-0.130
Hardness: 40-50 HRC
Density: 7.8 g/cm3
Hardness (HV): 290-340 HV10
Tensile Strength (PSI): 80,000 PSI
Rockwell Hardness Test: Rc 45 - Rc 53
Microstructure: Mixture of alpha and beta spheroidized carbides in a martensitic matrix

S170 Steel Shot for Water Filtration

About **S170 steel shot** for water filtration:

1. It is spherical, with a smooth finish and high density.

2. It is used to clean various parts, especially in the automotive industry.
3. It is a good choice in shot peening applications where roundness and surface finish are important.
4. It has a high finish on parts and provides excellent cleaning, peening, and polishing qualities.
5. Various sizes of S170 steel shots for water filtration are available from us.

S170 steel shot for water filtration is the best choice for water filtration because of the following reasons:
1- The high quality of the S170 steel shot compared to other types of Steel shot ensures a longer life span.
2- The low price of the S170 steel shot compared to other types of steel shot.
3- The high efficiency once was achieved using the S170 steel shot.

Learn How to Make Steel Shot with S170 Steel

S170 steel shot is a high-quality steel shot made of good high carbon steel, and the purity reaches over 99%. It's also known as a 0.2mm steel shot. It's one of the most common sizes due to its excellent breaking capacity on hard surfaces and remarkable reusability. If you want to make a steel shot with S170 size on your own, follow the steps below:
Put steel scrap into the furnace, smelt it into liquid iron and pour it into a mold to form a solid iron ingot;
Crush the solid iron ingot into small pieces;
Use crusher machine to crush small pieces into fine powder;
Mix the fine powder with other materials like carbon, sulfur, etc.;
Pour the mixture into the furnace, smelt it again and pour it into a mold to form a solid round ball;
Use the polishing machine to polish the solid round ball;
Heating the round ball to reach certain hardness with a tempering furnace.

Manufacturer of shot S 170 and S 170M steel balls in sizes from 1/4 to 13

S170 and S170M steel balls are commonly used for injection molding and plastics, an important part of the modern industry. The markets served by these steel balls include:
* Plastics
* Automotive
* Ventilation systems
* Precision bearings
* Aerospace
The S170 and S170M steel ball series have a high uniformity. Its density is 7.85g/cm3. It has an excellent surface finish, high hardness and wears resistance, good corrosion resistance, and low magnetic properties. It is mainly used in the metallurgical, bearing, and machinery industries. In addition to this type of steel ball product series, our company can also provide customers with other types of steel ball product series such as the AISI420C stainless steel ball series, AISI304 stainless steel ball series, AISI316 stainless steel ball series, and so on. Each type of product will have different characteristics in different fields of application. We look forward to your consultation!

Is Your Steel Shot S170 Manufacturered To Strength Requirements?

We've always made a point of offering higher than minimum hardness for our steel shot. As we have in the past, we always report the actual Brinell Hardness Number (BHN) on all of our material datasheets.
Per ASTM A930-14, "The minimum Brinell hardness number shall be 235 for S170 through S460 steel shot."
Here's the thing. If you're going to use a hardness number on the lower end of the range, the material should be denser. Because it is less dense and lighter, it will have lower impact energy. When we make our material, it is denser and heavier, with greater impact energy. That's why we can get away

with using a higher hardness number to keep up with our competitor's materials that are at the lower end of the scale.
We have done many different tests to see how long it takes to peen an area when using various types of steel shots and various media sizes. We can see that if we are using S170 at 25 BHN instead of 30 BHN (which we use), there is about a 10% difference in cleaning rate and about 15% difference in peening rate.
What makes a manufacturer more qualified to produce steel shots than another? If you are looking for a supplier of an S170 shot, what should you consider?
There are several factors to take into account.
S170 is a specification for steel shot used in blasting processes. The S designates the shot as Steel, and the 170 is the approximate hardness, measured on the Rockwell scale (Rc). The specification is defined by the Society for Automotive Engineers (SAE) and calls out specific requirements for hardness, sphericity, and chemistry.
The specification also defines four size ranges: "A" through "D." Steel shots made to meet the S170 specification can be found in any four size ranges. Most suppliers will make at least two different sizes within each range. For example, in the "A" size range, you may find A-1 or A-2.
In general, larger sizes are used where there is more room to work in, and desirable to remove relatively coarse-scale or heavy contamination. Smaller sizes are used when there is less room to work in or when it is desirable to remove small particles of contamination and fines.
The world's best steel shot manufacturing process, bringing you consistent quality in every bag of S170.
High quality steel shot is the result of superior manufacturing processes. We only use the world's best steel shot manufacturing facility.
Our facility utilizes a new revolutionary technology that delivers uniform size and strength control.
Our facility produces a higher-quality product because it eliminates segregation, which occurs when the molten metal is poured into molds in traditional gravity casting. The molten metal becomes segregated, often resulting in "hot spots" -- areas where the Steel has been melted more than once, which creates a weaker product.
Our facility atomizes the molten metal using centrifugal force to produce a uniform microstructure and metallurgical properties within each pellet to eliminate this problem. The result is consistent quality throughout every bag of S170 steel shot.

Why Choose Steel Shot S170 Manufacturer?

We are a professional steel shot S170 manufacturer in China. With more than 20 years experience in the abrasive industry, our company has won many orders from customers worldwide. Today, we will talk about why we chose us.

1. High purity. The quality of our products is ensured by using high-quality raw materials and advanced production technology. In the production process, each batch of raw materials is strictly inspected to ensure that its content reaches 99%.

2. High hardness. The hardness of our steel shot S170 is 50HRC, which can meet the requirements for processing surface finishing of various metal products with high hardness and strength at a low processing cost.

3. Good elasticity and toughness. Our steel shot S170 can withstand repeated impact and friction at high speed, with good elasticity and toughness, not easy to break or deform during use, and long service life.

4. Low contamination level. Because our steel shot S170 is made of quality alloy steel material, it has low carbon content. It can keep the workpiece clean during processing and not easily cause oxidation

or deformation at high temperatures.

S170 steel shot advantages over conventional HSS.

There are several advantages to using S170 steel shot over conventional high-speed Steel (HSS) or carbon shot for peening applications.
S170 is harder than HSS and thus does not wear as quickly. This means it can be reused more times than conventional shots, providing cost savings on both labor and media costs.
S170 also provides higher dimensional accuracy in peened parts due to its consistent size and shape. This is especially useful when peening gear teeth and other complex surfaces, where an uneven surface can result in vibration or other problems.
S170 is softer than many metals and leaves a smoother surface on the peened part. The abrasive nature of Steel shot makes it excellent for cleaning components, which is important when a part needs to be polished before painting or sealing.

Steel is used in so many industries and so many different ways because it's such an incredibly versatile metal. It has been used to answer some of the biggest questions that humankind has ever asked and will continue to be used far into the future as new answers are found.