

INL[®]

Grupo INL



AIRBLAST

Airblast-Abrasives



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Introduction

Airblast-Abrasives

Airblast-Abrasives fulfils in the requirements for metallic and non-metallic abrasives. Our dedicated team is available to assist our customers in selecting the right abrasives and analysing the working mix and production process in order to maximise efficiency. All our abrasives are subject to a rigorous quality control to ensure supply of the best available abrasives in its class. The scope of supply of Airblast-Abrasives is:

Metallic Abrasives		Non Metallic Abrasives	
•	High carbon steel grit	•	Brown fused alumina
•	High carbon steel shot	•	White fused alumina
•	Low carbon steel shot	•	Glass beads
•	Chilled iron grit	•	Garnet
•	Stainless steel shot	•	Aluminium silicate
•	Stainless steel cut wire		
•	Carbon steel cut wire		
•	Aluminium cut wire		
•	Zinc cut wire		

Airblast Group

For more than 40 years Airblast has been the world leader in providing blasting and painting solutions to the anticorrosion industries. With an unparalleled network of offices around the world Airblast works closely with our customers and distribution partners providing tried and tested equipment and consumables as well as developing customized solutions for specific applications.

Airblast is dedicated to maintain a profitable organization on a long term basis through ethically and morally sound business practices. By investing in the long term future of our organization, and those with whom we conduct business, Airblast believes that we can share sustained mutual success.

Our manufacturing facilities in Europe and the Far East produce fit for purpose quality products with region specific certification. All Airblast equipment and abrasives are manufactured according to the highest relevant safety standards and passes our rigorous quality controls before dispatch.

Mindful of the environmental responsibilities faced by our generation Airblast is committed to a programme of research and development into technologies facilitating zero emission blasting and painting along with an education programme promoting planet friendly operations.

High Carbon Steel Abrasives



Production

Airblast-Abrasives has two purpose built production facilities for the production of High Carbon Steel Abrasives covering an area of 4.000 m². The plant is using state of the art technology to fabricate the high quality product:

- Centrifugalizing process instead of high water jet streams to atomize the liquid steel into more spherical and uniform particles.
- A second heat quenching gives the abrasive a more uniform chemical and internal structure, making the abrasive less brittle.
- Air quenching instead of water quenching results in fewer micro cracks and thus a better durability of the abrasive.

High carbon steel grit and shot is produced by atomization of molten steel followed by a series of thermal and mechanical treatments in order to give the product the desired characteristics.

1. Careful selection of the scrap.
2. Melting the scrap in the electric induction furnace, adding the necessary Ferro alloys to adjust the composition.
3. Drying.
4. Atomization by centrifugalizing process to get a uniformly shaped grain and an increased density.
5. Screening to get the standard grain sizes.
6. Spiralling to remove the irregular shaped shot.
7. Quenching to optimise the microstructure and avoid stress cracks.
8. Tempering to get the right hardness.
9. Second screening to ensure the correct grain sizes.
10. Packaging.

Before, during and after the process, our in-house quality control department continuously verifies the consistency and the quality of our abrasives. Our Research and Development laboratory constantly strive to improve the key performance factors of the abrasive and optimise the production process.



High Carbon Steel Abrasives



High Carbon Steel Shot

High carbon steel shot is used in the majority of the wheel blast applications and creates a dimpled, peened surface. Only the shot's skin suffers from the impact and very thin flakes will progressively part from the shot, which itself stays round throughout its life cycle. Our steel shot is very durable with high resistance to impact fatigue, giving it an effective and quick cleaning rate.

Our high carbon steel shot is used in various applications like; desanding, descaling, cleaning, shot peening etc.. The centrifugal atomization process and double heat treatment at the Airblast plant, as well as continuous quality control measures, ensures the shot to be of the highest quality.

High Carbon Steel Grit

High carbon steel grit produces an etched or angular surface profile and is well suited for cleaning, descaling, etching and desanding applications. Our high quality steel grit has a long service life and is used in wheel blast machines and blast rooms.

High Carbon Steel Grit GP has the lowest hardness in the range of 42 to 52 HRC and is also referred to as angular shot, because the grit will get a round shape during its lifetime. It is mainly used in wheel blast machines and it has good results in the foundry industry because it cleans faster with little increase in maintenance costs and machine parts wear. GP is used for cleaning, descaling and desanding.

High Carbon Steel Grit GL has a medium hardness in the range 53 to 60 HRC. It is mainly used in wheel blast machines and is particularly suited to heavy descaling and surface preparation requirements. Although GL is of medium hardness, it also loses its angular shape during shot blasting.

High Carbon Steel Grit GH. The maximum hardness ranging from 60 to 64 HRC. It stays angular in the operating mix and is therefore ideally suited for surface etching requirements. GH is used in blast rooms for quick cleaning and to achieve an anchor profile prior to coating.

Metallic abrasives



Low Carbon Steel Shot

Low carbon steel shot has a lower hardness than high carbon steel shot. Because of its microstructure it resists impact well until the moment it suddenly scatters and turns into dust. It is often used for flash descaling, but the coverage of low carbon shot is not favourable because there are virtually no smaller particles in the operating mix. Since low carbon steel shot is softer it is not possible to crush it into grit, which is therefore not available.

Chilled Iron

Chilled iron is a hard abrasive making it suitable for etching purposes, but less resistant to impact. During the blasting process chilled iron breaks at an angle producing a permanent mixture of sharp grit with the ability to roughen up the hardest surface. Chilled iron has excellent cleaning properties, but with a considerable lower life cycle than cast steel abrasives. Chilled iron is suitable to be used in blast rooms for quick cleaning and edging but shouldn't be used in wheelblast machines, since it wears its parts quickly.

Stainless Steel Abrasives

Companies casting or fabricating stainless aluminium or light alloy parts can safely use stainless steel abrasives, since it leaves no ferrous residue contamination and it achieves effective blasting performances. Stainless steel abrasives are very durable and are being used for deburring, blast cleaning and surface finishing.

Cut Wire

Cut wire pellets are made of wire that is cut in short sections.

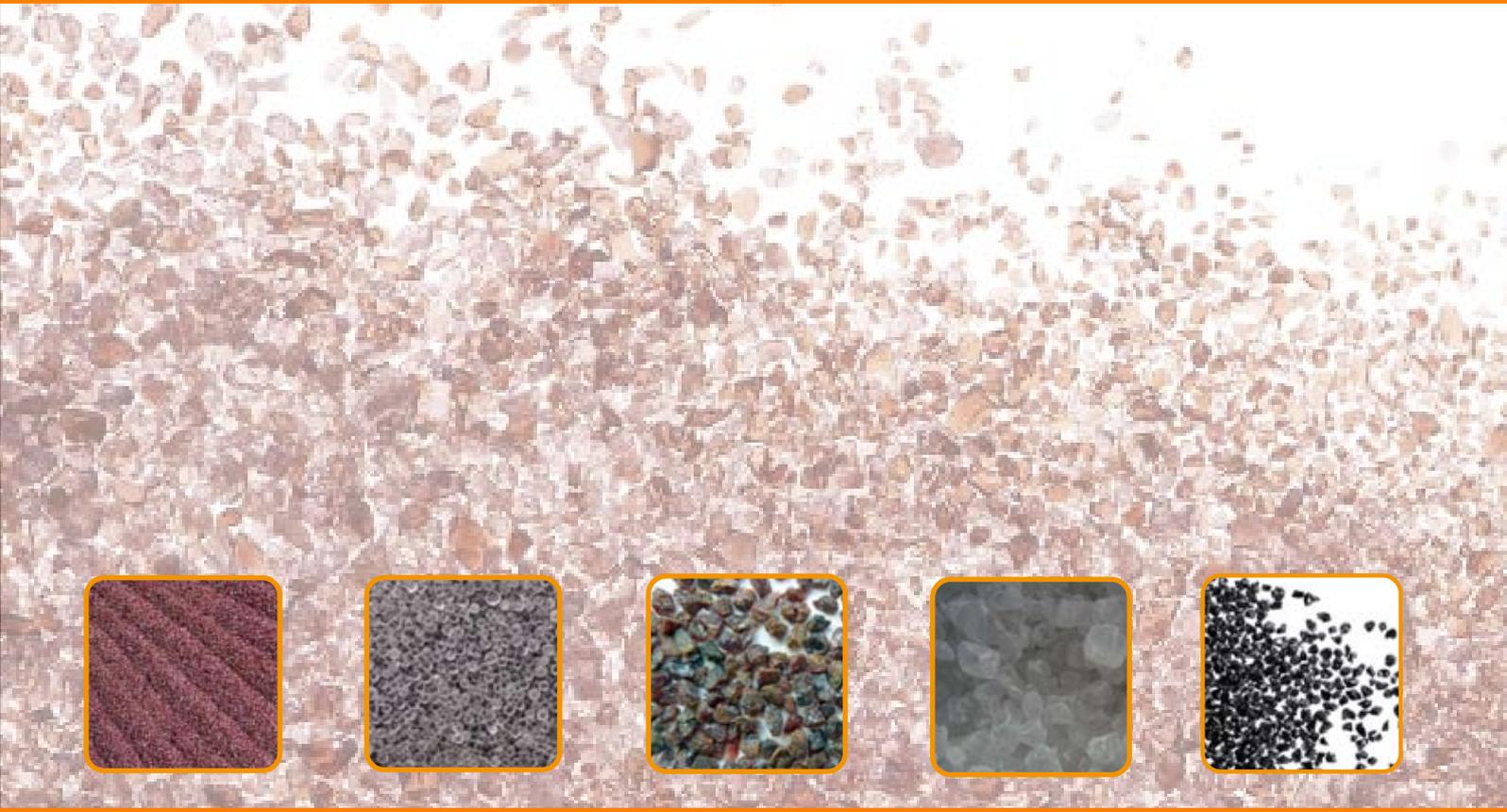
Unconditioned carbon steel cut wire is used for blast cleaning operations. The cut wire is very aggressive and therefore quite effective in heavy duty operations, but wears more on wheel blast machine parts. Conditioned steel cut wire is used in shot peening applications where high carbon steel shot doesn't provide a stable enough operation mix.

Stainless steel cut wire is used for cleaning and peening applications where ferrous contamination can't be tolerated. It produces a very bright surface, maintains its shape longer than cast abrasives and it produces a dust free surface. Stainless steel cut wire is available as cut or conditioned.

Aluminium cut wire shot is used for the blast cleaning, surface finishing and deburring of mainly aluminium castings and forgings. It is very durable and leaves no ferrous residue on the substrate.



Non-metallic abrasives



Aluminium Oxide

Aluminium oxide is manufactured by fusing bauxite; coke and iron in an electric furnace at very high temperatures. Airblast brown fused alumina and white fused alumina available that contain very low levels of free iron. Aluminium oxide is a recyclable abrasive mainly used in cabinets and blast rooms. Because of its low iron content, alumina is often used in blasting operations where iron contamination on the non-ferrous metal substrate is not allowed. Aluminium oxide is a reusable abrasives that is very hard and sharp and has an effective and brutal abrasion.

Glass Beads

Our glass beads are manufactured from high-grade, specially designed glass to reduce wear and fracture. The particles are heat treated into round balls to equalise stress and resist fracture. Glass beads contain no free iron to cause corrosion on non-ferrous surfaces, therefore glass beads are very suitable to use on all types of metals. Since it doesn't create an anchor profile, it is mainly used to clean a substrate without roughening it or to polish the surface. Glass beads can be reused and are mainly used in blast rooms and blast cabinets.

Garnet

Garnet is a natural mineral abrasive which is irregularly shaped with polished edges, it contains no heavy materials and has a low level of free silica. Because garnet is very heavy and hard for a mineral abrasive it accomplishes a fast cleaning rate. It is being used to remove rust, mill scale, old coatings and to clean buildings. Some of the advantages of garnet are; fast cleaning, relatively low dust generation (as compared to copper- or coal slag), environmental friendly and reusability.

Aluminium Silicate

Also known as coal slag is a dispensable abrasive which is a by-product of coal fired electric power generation plants. This abrasive generates less dust than copper slag and is mainly used in open blasting operations in the oil- and shipyard industry.