What Makes Our Aluminum Oxide So Good?

TABLE II SPEC: The Aluminum Oxide IDS Blast® supplies meets ANSI Table II Specifications. Most Aluminum Oxide abrasive available only meets the less stringent Table III requirements. What does this mean for you...
- Low variability in grain size
- Less fines
- Consistent repeatable results

DOUBLE MAG: The Aluminum Oxide IDS Blast® supplies is double magnetically separated resulting in:
- Lower iron content
- Lower possibility of flash rust due to iron surface contamination

Brown Aluminum Oxide: is carefully shaped and graded for pressure blasting applications. It is sharp and can be used and reused again. Absence of wasteful flats and slivers maximizes cutting efficiency in deburring, descaling, etching and surface smoothing applications. Low iron content reduces the danger of rust-staining to weather-exposed granite, marble and stainless steel.
- Recyclable
- Maximum resistance to breakdown
- Less than 1% free silica
- Low iron content
- Minimizes danger of rust-staining
- Non-skid floor coating applications

White Aluminum Oxide: White Aluminum Oxide has higher hardness and slightly lower toughness compared to brown aluminum oxide. It is characterized by its high purity, ability to self-sharpen, better cutting, lower heat emissions, higher efficiency, acid and alkali resistance and good thermal stability.
- High resistance to breakdown
- Less than 1% free silica
- Liquid honing capabilities
- Allows for repeated use, less dust and less clean up
- Eliminates danger of rust-staining
- Non-skid floor coating applications

TIP: Never use aluminum oxide on parts that are going to be brazed because the filler metal won’t stick.
How Aluminum Oxide Abrasive Is Made

Aluminum Oxide ($\text{Al}_2\text{O}_3$) is a chemical compound of aluminum and oxygen commonly called alumina, aloxide, aloxite or alundum and is made from naturally occurring bauxite.

**Part 1: Processing Bauxite**

- Before processing, bauxite, the crude raw material, is calcined at about 950°C to remove both free and combined water.
- The bauxite is then mixed with ground coke (~3%) and iron borings (~2%) in a pot-type, electric-arc furnace for 24 hours at 2000°C.
- An electric current is applied and the intense heat, on the order of 2000°C, melts the bauxite and reduces the impurities that settle to the bottom of the furnace.
- As the fusion process continues, more bauxite moisture is added until the furnace is full.
- The furnace is then emptied and the outer impure layer is stripped off.
- The core of aluminum oxide is then removed and broken down into smaller pieces to be delivered to the abrasive production facility.

**Part 2: Abrasive Production**

- When the aluminum oxide arrives at the abrasive production facility, it is crushed into grains of varying sizes.
- Any iron particles present are then removed using magnetic separation (double magnetic separators in our case).
- The aluminum oxide grains are screened to separate them by size and packaged for shipping.

Distributed By:

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Aluminum Oxide Facts

- Melting Point: 2,072°C / 3,762°F
- Boiling Point: 2,977°C / 5,391°F
- Aluminum Oxide is an electrical insulator but has a relatively high thermal conductivity
- Annual world production in 2015 was approximately 115 million tonnes
- 90% of produced Aluminum Oxide is used to produce aluminum metal
- It is a common ingredient in sunscreen
- Many formulations of glass contain Aluminum Oxide as an ingredient
- Powdered Aluminum Oxide is a major component of billiard cue tip “chalk”
- Aluminum Oxide flakes are used in paint for reflective decorative effects
- Most ceramic eyes on fishing rods are circular rings made from aluminum oxide