



# GNP Graystar

Specialty Materials



## TECHNICAL DATA SHEET

### Black Aluminum Oxide

#### Typical Chemistry

|  | General | Special |
|--|---------|---------|
| Aluminum Oxide (Al <sub>2</sub> O <sub>3</sub> ) | ≥ 62 %  | ≥ 80 %  |
| Iron Oxide (Fe <sub>2</sub> O <sub>3</sub> )     | 6 -12 % | 4 - 8%  |
| Silica Dioxide (SiO <sub>2</sub> )               | ≤ 25 %  | ≤ 10 %  |
| Titanium (TiO <sub>2</sub> )                     | 2 - 4 % | 2 - 4 % |

#### Physical Characteristics

|                |  |
|----------------|--|
| Color:         | Black  |
| Crystal Form:  | Trigonal System  |
| True Density:  | ≥ 3.50 g/cm <sup>3</sup>                                 |
| Melting Point: | 2050°C   |
| Hardness:      | 8.0-9.0 (Mohs)<br>2000-2200 kg/mm <sup>2</sup> (Vickers) |

#### General Black Aluminum Oxide Sizing

|  |
|--|
| 3-5 mm, 1-3 mm, 0.4-1.0 mm, 0-1 mm     |
| F12-F400 Grit (FEPA F: 42-2:2006)      |
| Other Sizes are Available Upon Request |

#### Special Black Aluminum Oxide Sizing

|  |
|--|
| Grits: F46 - F240 (FEPA F: 42-2:2006)        |
| Powders: F280-F1000 Grit (FEPA F: 42-2:2006) |
| Other Sizes are Available Upon Request       |

#### Description:

GNP Graystar's Black Aluminum Oxide is produced by fusing bauxite, iron oxide, and other elements in an arc-furnace. The resulting product has a moderate hardness, high toughness, high temperature resistance, good thermal stability, and excellent self-sharpening.

#### Applications:

GNP Graystar's Black Aluminum Oxide, due to its thermal stability and low heat generation when polishing, is used to polish metal pieces, especially stainless steel, producing a high smooth finish with little surface discoloration. It is also used in resin bonded abrasives, blasting applications, as anti-skid surfacing material, abrasive belts, flap wheels, fiber wheels, and other polishing & lapping applications.

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