

# Calcined Alumina

## Abrasive Grain for Buffing & Polishing / Tumbling

Calcined Alumina is used extensively for a wide variety of cleaning, polishing and deburring applications because of its unique crystal structure. It is the most widely used abrasive, generally used for ferrous alloys, non-ferrous and thermoset plastics. Its particles are made up of many smaller crystals that extend the abrasive and polishing action.

The R.J. Marshall Company offers a range of grades based on abrasive properties and particle sizes with quality control that assures consistency of abrasiveness for each shipment.



**B-25** Mild abrasive. Cost competitive. Good for tumbling.

**B-75** High quality color grain intended for high luster on stainless steel, non-ferrous and plastic products.

**B-505** Widely used for properties that are unique. Excellent for flatware, cookware and small appliances.

**B-800** High cut but still maintains color properties.

### Green Line - Recycled Materials / Cost Effective

We have extended our line of Calcined Alumina abrasive grain products to include a product that is both cost effective and made with pre-consumer (post-industrial) recycled materials. This Green Line product might also be a benefit to your current LEEDS or other environmental programs. This lower cost material will give abrasive properties that are equivalent to standard products.

**GB-50** Gives color but mostly intended for a mild cut.

*NOTE: Product color is not guaranteed with green line products.*

| Technical Information               | Very Mild Abrasive<br><b>B-25</b> | Mild Abrasive<br><b>B-75</b> | Cut<br><b>B-505</b> | High Cut<br><b>B-800</b> | Cut & Color<br><b>GB-50</b> |
|-------------------------------------|-----------------------------------|------------------------------|---------------------|--------------------------|-----------------------------|
| <b>Typical Physical Properties</b>  |                                   |                              |                     |                          |                             |
| +80 mesh                            | -                                 | -                            | -                   | 3%                       | -                           |
| +100 mesh                           | 0.5% max                          | 0.1% max                     | 2.5%                | 9%                       | 0.05%                       |
| +200 mesh                           | 3%                                | 1% max                       | 65%                 | 68%                      | 0.5%                        |
| +325 mesh                           | 5%                                | 10% max                      | 88%                 | 90%                      | 5%                          |
| pH                                  | 9.2                               | 9.3                          | 9.2                 | 9.2                      | 9.2                         |
| Abrasive Value                      | 200                               | 275                          | 630                 | 850                      | 250                         |
| Bulk Density (lbs/ft <sup>3</sup> ) | 61                                | 45                           | 60                  | 60                       | 44                          |
| Oil Absorption Value (ml/100g)      | 45                                | 55                           | 53                  | 51                       | 55                          |
| Surface Area m <sup>2</sup> /g      | 15-30                             | 8-12                         | 5-9                 | 0.75                     |                             |
| Primary Crystal Size (μm)           |                                   | 1                            |                     |                          |                             |
| <b>Typical Chemical Properties</b>  |                                   |                              |                     |                          |                             |
| Al <sub>2</sub> O <sub>3</sub>      | 99.43%                            | 99.6%                        | 99.5%               | 99.5%                    | 97.7%                       |
| SiO <sub>2</sub>                    | 0.045%                            | 0.02%                        | 0.018%              | 0.018%                   | 0.04%                       |
| Fe <sub>2</sub> O <sub>3</sub>      | 0.02%                             | 0.02%                        | 0.02%               | 0.02%                    | 0.01%                       |
| Na <sub>2</sub> O                   | 0.5%                              | 0.3%                         | 0.3%                | 0.3%                     | 0.42%                       |

The R.J. Marshall Company is dedicated to maintaining the highest environmental standards by unwavering compliance with state and federal regulations, waste prevention measures and consistent monitoring of our manufacturing processes. These materials are available from our Rockwood, MI facility and other distribution locations as needed. Samples are available at no charge and truckload pricing for trial quantities.



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