SAFETY DATA SHEET

SECTION 1: IDENTIFICATION
Product Identifier: Bonded Abrasives - Aluminum Oxide, Vitrified Bond 11
Grinding Wheels, Stones, Mounted Points & Segments
Recommended Use: Abrasive Product
Manufacturer: Grier Abrasive Co., Inc.
Address: 123 W. Taft Drive
South Holland, IL 60473, U.S.A.
Telephone #: 708-333-6445
Emergency #: 708-333-6445
Fax #: 708-333-6554
Email: griersales@grierabrasive.com

SECTION 2: HAZARD IDENTIFICATION
Label Elements: N/A

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient Name</th>
<th>C.A.S. #</th>
<th>Weight (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum Oxide</td>
<td>1344-28-1</td>
<td>75 - 95</td>
</tr>
<tr>
<td>Clay</td>
<td>1332-58-7</td>
<td>0 - 15</td>
</tr>
<tr>
<td>Feldspar</td>
<td>68476-25-5</td>
<td>0 - 15</td>
</tr>
<tr>
<td>Zinc Oxide</td>
<td>1314-13-2</td>
<td>0 - 5</td>
</tr>
<tr>
<td>Frit</td>
<td>65997-18-4</td>
<td>0 - 15</td>
</tr>
</tbody>
</table>

SECTION 4: FIRST-AID MEASURES

Inhalation: Remove person to fresh air. If irritation persists, get medical attention.
Skin Contact: Wash with soap and water. If irritation persists, get medical attention.
Eye Contact: Flush with plenty of water. If irritation persists, get medical attention.
Ingestion: No need for first aid is anticipated.

Most important symptoms/effects: See Section 11
Indication of any immediate medical attention: N/A

SECTION 5: FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Water, Foam, CO2 or other fire fighting agents used for combustible materials.
Specific Hazards: None inherent in this product.
Special Protective Actions for Fire Fighters: No special protective actions are anticipated.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions: Follow normal clean up procedures. Observe precautions from other sections.
Environmental Precautions: N/A
Methods for Clean-up: N/A

SECTION 7: HANDLING AND STORAGE

Precautions for Handling: Avoid breathing of dust created by grinding or sanding. Always check product for damage prior to use since damaged product can break apart during use. Replace if damaged.
**SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Control Parameters / Occupational Exposure Limits:**

<table>
<thead>
<tr>
<th>Ingredient Name</th>
<th>C.A.S. #</th>
<th>OSHA (TWA)</th>
<th>ACGIH (TWA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum Oxide</td>
<td>1344-28-1</td>
<td>15 mg/m³</td>
<td>10 mg/m³</td>
</tr>
<tr>
<td>Clay</td>
<td>1332-58-7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feldspar</td>
<td>68476-25-5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zinc Oxide</td>
<td>1314-13-2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frit</td>
<td>65997-18-4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Engineering Controls:**
Maintain sufficient mechanical or natural ventilation to minimize airborne dust. Recommend use of local exhaust ventilation when grinding. Follow ANSI guidelines B 7.1.

**Personal Protective Equipment:**
- **Skin/hand:** Wear gloves suitable for grinding operation.
- **Respiratory:** If needed, OSHA Approved respiratory protection for nuisance dust.
- **Eye/Face:** Safety glasses or face shield should be worn during all grinding activities.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

<table>
<thead>
<tr>
<th>Physical Form</th>
<th>Solid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Abrasive Product (various colors)</td>
</tr>
<tr>
<td>Odor</td>
<td>none</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>N/A</td>
</tr>
<tr>
<td>pH</td>
<td>N/A</td>
</tr>
<tr>
<td>Melting Point</td>
<td>N/A</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>N/A</td>
</tr>
<tr>
<td>Flash Point</td>
<td>N/A</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>N/A</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Flammable Limit (LEL):</strong></td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Flammable Limit (UEL):</strong></td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Vapor Pressure:</strong></td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Vapor Density:</strong></td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Density:</strong></td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Specific Gravity:</strong></td>
<td>1.6 - 2.4</td>
</tr>
<tr>
<td><strong>Solubility in Water:</strong></td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Solubility (non-water):</strong></td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Partition Coefficient: n-octanol/water:</strong></td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Auto-ignition Temperature:</strong></td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Decomposition Temperature:</strong></td>
<td>N/A</td>
</tr>
</tbody>
</table>

**SECTION 10: STABILITY AND REACTIVITY**

- **Reactivity:** Non-reactive under normal use.
- **Conditions to Avoid:** None known
- **Chemical Stability:** Stable
- **Incompatible Materials:** None known
- **Possibility of Hazardous Reactions:** None known
- **Hazardous Decomposition Products:** None known

**SECTION 11: TOXICOLOGICAL INFORMATION**

- **Inhalation:** ACUTE: Dust from grinding may irritate respiratory tract at high concentrations. CHRONIC: Dust from grinding may affect breathing capacity.
- **Skin Contact:** ACUTE: Some may experience skin irritation from dust when grinding.
- **Eye Contact:** ACUTE: Dust from grinding may be mechanical irritant to eyes.
- **Ingestion:** No known adverse effects, but ingestion not recommended.
- **Medical Conditions Aggravated by Exposure:** Bronchial and/or chronic lung disease

**SECTION 12: ECOLOGICAL INFORMATION**

- **Ecotoxicological Information:** No data available
- **Chemical Fate Information:** No data available
- **Persistence and Degradability:** N/A
- **Bioaccumulative potential:** No data available
- **Mobility in Soil:** No data available
- **Other adverse effects:** None known
## SECTION 13: DISPOSAL CONSIDERATIONS

**Disposal Method:** Dispose in accordance with local, regional, national, international regulations.

## SECTION 14: TRANSPORT INFORMATION

Not Regulated per U.S. DOT, IATA or IMO

## SECTION 15: REGULATORY INFORMATION

**EPA TSCA Inventory:** Defined as “article” by TSCA regulations, so exempt from TSCA Inventory requirements.

**SARA Title III:** This product is not subject to SARA 313 reporting.

**SARA 311/312:** No known hazard categories to report.

## SECTION 16: OTHER INFORMATION

**DISCLAIMER:**

The information in this Safety Data Sheet (SDS) is believed to be correct as of the date issued. This SDS is based on information that is believed to be reliable, but may be subject to change. Grier Abrasive Co., Inc. (Grier) makes no warranties, expressed or implied, including as to merchantability or fitness for a particular purpose or course of performance or usage of trade. This document is intended as a guide for the safe handling, storage and use of this material under normal conditions of use. Grier assumes no liability to any user thereof.

**NFPA Ratings:**

- **Health:** 1
- **Fire:** 0
- **Instability:** 0
- **Special:** None

**HMIS Ratings:**

- **Health:** 1
- **Fire:** 0
- **Physical:** 0
- **Personal Protection:** X (see PPE Sec. 8)

**Abbreviations:**

- **EPA:** Environmental Protection Agency
- **NFPA:** National Fire Protection Agency
- **TSCA:** Toxic Substances Control Act
- **N/A:** Not Applicable
- **ACGIH:** American Conference of Governmental Industrial Hygienists
- **ANSI:** American National Standards Institute
- **HMIS:** Hazardous Material Identification System
- **OSHA:** Occupational Health and Safety Administration (U.S.)
- **SARA:** Superfund Amendments and Reauthorization Act