1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT DESCRIPTION:
Reinforced Resinoid Bonded Abrasive Wheel

GENERAL USE:
For material removal. See ANSI B7.1-2000

MANUFACTURER ADDRESS:
Osborn
2350 Salisbury Road
Richmond, Indiana 47374, U.S.A.

CONTACT NUMBER:
765-965-5333

24 HOUR EMERGENCY TELEPHONE NUMBER:
Chemtrec 800-424-9300

2. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW
Wear Respirator, eye protection, and protective clothing when using product. Product will produce sparks and debris when in use, avoid using product near reactive or flammable. Substances or electrical equipment. Discard if product comes in contact with water

GHS Label requirements
Pictogram
None

Signal Word
None

Respiratory
Wheel dust is a respiratory irritant

Skin
Wheel dust and fiberglass reinforcement is a skin irritant
Ingestion
Acute product toxicity unknown

Eyes
Wheel Dust is an eye irritant

Chronic
Potential Chronic Effects include skin sensitization and restricted breathing

Hazard Statement
This product is classified as non-hazardous under OSHA HCS 29 CFR 1910.1200

3. COMPOSITION/INGREDIENT INFORMATION

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum Oxide</td>
<td>1344-28-1</td>
<td>60-80</td>
</tr>
<tr>
<td>Silicon Carbide</td>
<td>409-21-2</td>
<td>0-70</td>
</tr>
<tr>
<td>Zirconium Oxide</td>
<td>1314-23-4</td>
<td>0-12</td>
</tr>
<tr>
<td>Calcium Hydroxide</td>
<td>1305-62-0</td>
<td>0-1</td>
</tr>
<tr>
<td>Barium Sulfate</td>
<td>7727-43-7</td>
<td>0-10</td>
</tr>
<tr>
<td>Iron Sulfide</td>
<td>12068-85-8</td>
<td>0-18</td>
</tr>
<tr>
<td>Alkali Aluminum Fluorides</td>
<td>15096-52-3/60304-36-1</td>
<td>0-15</td>
</tr>
<tr>
<td>Cured Phenolic Resin</td>
<td>N/A</td>
<td>0-15</td>
</tr>
<tr>
<td>Glass Fiber</td>
<td>N/A</td>
<td>0-5</td>
</tr>
<tr>
<td>Steel</td>
<td>N/A</td>
<td>0.1-1</td>
</tr>
<tr>
<td>Carbon Black</td>
<td>N/A</td>
<td>Trace</td>
</tr>
<tr>
<td>Zinc</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

General Measures
Under normal handling and use, exposure to solid forms of this material present few health hazards. Subsequent operations such as grinding or melting may produce potentially hazardous dust or fumes which can be inhaled or come in contact with the skin or eyes.

Inhalation
Terminate exposure and remove to fresh air. Obtain medical assistance.
Skin Contact
Terminate exposure and remove to fresh air. Obtain medical assistance

Eye Contact
Irritant. Treat as a foreign body in the eye. Flush with large amounts of clean water for at least 15 minutes. If irritation persists, obtain medical assistance.

Ingestion
Obtain medical assistance.

Most Important Symptoms/Effect, Acute and Delayed
No applicable data available

Indication of Any Immediate Medical Attention and Special Treatment Needed
No applicable data available

Signs and Symptoms of Exposure
Acute, may cause coughing and shortness of breath during grinding; eye and skin irritation

5. FIRE FIGHTING MEASURES
Extinguishing Media
Water or carbon dioxide.

Fire Fighting Procedure
None needed.

Special Protective Equipment
Consult NFPA or CFPA procedures.

Hazardous Combustion Products
This product is not combustible, however, consideration must be given to the potential fire/explosion hazards from the base material being processed. Many materials create flammable/explosive dusts or turnings when brushed, machined or ground.

6. ACCIDENTAL RELEASE MEASURES
Personal Precautions, Protective Equipment and Emergency Procedures
Minimize generation of dust. Use appropriate protective equipment to avoid inhalation and eye contact if dust is generated.

Environmental Precautions
Notify authorities as required by local, state and federal regulations.

Methods for Clean Up
Pick up, sweep up or vacuum any dust, and place in a container for disposal.

Reference to Other Sections
Refer to Section 8 for personal protective equipment and Section 13 for proper disposal.
7. HANDLING AND STORAGE

Precautions for Safe Handling
Avoid damage to wheel. Do not drop. Always handle in accordance with ANSI B7.1. Always use in accordance with ANSI Z43.1 and OSHA 1910.215. Do not use dropped or damaged wheels. Do not use without machine guard in place. Do not exceed maximum RPM on wheel. Use only with adequate ventilation. Avoid breathing dust. Wash thoroughly after handling and use, especially before eating, drinking or smoking. Consider potential exposure to components of the base materials or coatings being brushed, machined or ground. Refer to OSHA's substance specific standards for additional work practice requirements where applicable.

Conditions for Safe Storage
Store in a cool, dry location as per ANSI B7.1

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>OSHA / PEL</th>
<th>ACGIH / TLV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum Oxide</td>
<td>N/A</td>
<td>10mg/m³</td>
</tr>
<tr>
<td>Silicon Carbide</td>
<td>N/A</td>
<td>10mg/m³</td>
</tr>
<tr>
<td>Zirconium Oxide</td>
<td>N/A</td>
<td>10mg/m³</td>
</tr>
<tr>
<td>Calcium Hydroxide</td>
<td>N/A</td>
<td>5mg/m³</td>
</tr>
<tr>
<td>Barium Sulfate</td>
<td>5mg/m³</td>
<td>10mg/m³</td>
</tr>
<tr>
<td>Iron Sulfide</td>
<td>N/A</td>
<td>10mg/m³</td>
</tr>
<tr>
<td>Alkali Aluminum Fluorides</td>
<td>2.5mg/m³</td>
<td>2.5mg/m³ (as F)</td>
</tr>
<tr>
<td>Cured Phenolic Resin</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Glass Fiber</td>
<td>5mg/m³</td>
<td>10mg/m³</td>
</tr>
<tr>
<td>Carbon Black</td>
<td>3.5mg/m³</td>
<td>3.5mg/m³</td>
</tr>
</tbody>
</table>

Note: Consider also components of base materials and coatings being worked.

Respiratory Protection
OSHA/NIOSH approved respirator. See OSHA 29 CFR 1910.134 or European Standard EN 149.

Hand Protection
Leather gloves.

Eye Protection
Protective eyewear such as safety glasses or face shield. Refer to OSHA 29 CFR 1910.133.
Skin Protection
Leather apron, chaps, or shoe coverings to shield from heavy spark showers in operation.

Hearing Protection
Hearing protection such as approved ear muffs or ear plugs. Refer to OSHA 29 CFR 1910.95.

Ventilation
Engineering Controls recommended. See ANSI Z43.1. Refer to OSHA 29 CFR 1910.94.

Wash with soap and water after handling and grinding.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Dark colored Solid</td>
</tr>
<tr>
<td>Form</td>
<td>Solid in various forms</td>
</tr>
<tr>
<td>Color</td>
<td>Dark</td>
</tr>
<tr>
<td>Odor</td>
<td>Burning plastic odor in use</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Not determined</td>
</tr>
<tr>
<td>pH</td>
<td>N/A</td>
</tr>
<tr>
<td>Melting Point</td>
<td>NOT LISTED</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>No data</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</td>
<td>NOT LISTED</td>
</tr>
<tr>
<td>Upper Flammable Limit</td>
<td>No data</td>
</tr>
<tr>
<td>Lower Flammable Limit</td>
<td>No data</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>No data</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>N/A</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>2.0 – 4.0</td>
</tr>
<tr>
<td>Solubility in H2O</td>
<td>Insoluble</td>
</tr>
<tr>
<td>Partition Coefficient (n-octanol/water)</td>
<td>Not determined</td>
</tr>
</tbody>
</table>
10. STABILITY AND REACTIVITY

Reactivity
Stable at normal ambient temperature and pressure; avoid excessive moisture and humidity, temperature extremes and contact with acids or solvents.

Chemical Stability
Stable at normal ambient temperature and pressure; avoid excessive moisture and humidity, temperature extremes and contact with acids or solvents.

Conditions to Avoid
No Data

Incompatible Materials
Strong acids, Strong bases, Strong oxidizing agents

Hazardous Decomposition Products
During use, dust and decomposing organic fumes are generated which may contain trace amounts of phenol, formaldehyde and fluorides. In most cases, the material removed from the work piece will be significantly greater than the grinding wheel components. Coolants or other surface residues may produce other decomposition products.

Hazardous Polymerization
Polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Route of Exposure</th>
<th>Acute LD50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum Oxide</td>
<td>Oral</td>
<td>&gt;5000 mg/kg (rat)</td>
</tr>
<tr>
<td>Zirconium Oxide</td>
<td>Oral</td>
<td>&gt;8800 mg/kg (mouse)</td>
</tr>
<tr>
<td>Glass Fiber</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Alkali Aluminum Fluorides</td>
<td>Oral</td>
<td>&gt;5000 mg/kg (rat)</td>
</tr>
<tr>
<td>Cured Phenolic resin</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Carbon black</td>
<td>Oral</td>
<td>8000 mg/kg (rat)</td>
</tr>
</tbody>
</table>
Silicon Carbide | N/A | N/A
--- | --- | ---
Calcium Hydroxide | Oral | 7340 mg/kg (rat)
Barium Sulfate | N/A | N/A
Iron Disulfide | N/A | N/A

Likely Route of Exposure
No applicable data available

**Eyes**
Dust or fumes may cause eye irritation.

**Skin Contact**
Grinding wheel may cause abrasions; dust may cause skin irritation.

**Inhalation**
Dust may cause respiratory irritation. May be harmful by inhalation. Prolonged inhalation may cause lung damage.

**Ingestion**
Can cause stomach pain, vomiting and diarrhea.

**Acute Toxicity**
No data

**Reproductive Toxicity**
Unknown.

**Carcinogenicity**
Unknown.

**Germ Cell Mutagenicity**
Unknown.

**Repeat Exposure**
No applicable data available

**Further Information**
No applicable data available

**12. ECOLOGICAL INFORMATION**

**Toxicity**
No data is available on the product itself. Toxicity is expected to be low based on insolubility in water.

**Persistence and Degradability**
No data
Bio-Accumulative Potential
No data

Mobility in Soil
No data

Results of PBT and vPvB Assessment
Not applicable

Other Adverse Effects
No data

13. DISPOSAL CONSIDERATIONS
General
No applicable data available

Packaging
No applicable data available

14. TRANSPORTATION INFORMATION
DOT/ADR/IATA/IMDG Regulations:
Not regulated

UN Number:
N/A

UN Proper Shipping Name:
N/A

Transport Hazard Class:
N/A

Packing Group:
N/A

Marine Pollutant:
N/A

Special Precautions:
N/A

15. REGULATORY INFORMATION
US Regulations
California Proposition 65
No applicable data available

PA Right to Know Regulated Chemical(s)
No applicable data available
NJ Right to Know Regulated Chemical(s)
No applicable data available

TSCA Listed
All components are listed.

Regulation (EC) No 1272/2008 (CLP)
N/A

Chemical Safety Assessment
A chemical safety assessment has not been carried out.

16. OTHER INFORMATION
Revision Number 1
Supersedes Date 2015/11/11
Prepared By Osborn

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