Aluminum Oxide, Powder and Pieces

SECTION 1: Chemical Product and Company Identification

MSDS Name: Aluminum Oxide, Powder and Pieces
Manufacturer Name: Kurt J. Lesker Company
Address:
P.O. Box 10
1925 Route 51
Clairton, PA 15025

For emergencies in the US, call CHEMTREC: 800-424-9300
Other Phone: US National Poison Hotline: (800) 222-1222
Manufacturer MSDS Revision Date:
06/25/2008
Supersedes: 06/22/2006
Supersedes: 09/23/2002
Synonyms:
Aluminum oxide; alumina; A 1 (sorbent); A1-0109P; abrarex; activated aluminum oxide; alcoa F 1; alnite; alon; aluminum sesquioxide; alumite; alundum; brockmann, aluminum oxide; cab-o-sil; compalox; dialumina trioxide; dispal; dotment 324; faserton; G 2 (oxide); KHP 2; lucalox; microgrit WCA; PS 1; RC 172DBM.
Chemical Family: Metal oxide
Chemical Formula: Al2O3
Molecular Weight: 101.96
HMIS
Health Hazard: 1
Fire Hazard: 0
Reactivity: 0
Personal Protection: E

UPC/EAN: 215–691–6

DOT HAZARD LABEL: No data.
HMIS HAZARD RATINGS:
Minimal: 0
Slight: 1
Moderate: 2
Serious: 3
Extreme: 4
Product Codes:

SECTION 2: Hazardous Ingredients/Identity Information

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS#</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum oxide</td>
<td>1344-28-1</td>
<td>0.0–100.0%</td>
</tr>
</tbody>
</table>
RTECS:
BD1200000
OSHA PEL TWA: 15 mg/m³
ACGIH TLV TWA: 10 mg/m³
SARA Section 302: No
SARA Section 313: Yes
Other Exposure Guidelines:
  Resp: 5 mg/m³
SEC. 304 RQ: No

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS#</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>See SECTION 10 – Other Information</td>
<td>Not Available</td>
<td>0.0–100.0%</td>
</tr>
</tbody>
</table>

RTECS:
  Not Applicable
OSHA PEL TWA: No data.
ACGIH TLV TWA: No data.
SARA Section 302: No
SARA Section 313: No
Other Exposure Guidelines:
  No data.
SEC. 304 RQ: No

SECTION 3: Physical And Chemical Characteristics

Physical State/Appearance:
  Powder
Color:
  White
Odor:
  No odor
Physical State:
  Solid
pH:
  No data.
Vapor Pressure:
  (VS. AIR OR MM HG): 1 mm at 2158.0 deg C (3916.4 deg F)
Vapor Density:
  (VS. AIR = 1): No data.
Boiling Point:
  2977.00 deg C (5390.6 deg F)
Melting Point:
  2050.00 deg C (3722.0 deg F)
Solubility:
  OTHER SOLUBILITY NOTES: Soluble in hot NaOH
Solubility In Water:
  insoluble
Specific Gravity:
  (WATER = 1): 4 at 20.0 deg C (68.0 deg F)
Density:
  No data.
Evaporation Point:
(VS BUTYL ACETATE=1): No data.

Percent Volatile:
Not Applicable

Flash Point:
Not Applicable

Upper Flammable Explosive Limit:
Not Applicable

Lower Flammable Explosive Limit:
Not Applicable

SECTION 4 : Fire And Explosion Hazards

Flash Point:
Not Applicable

Flash Point Method:
No data.

Upper Flammable or Explosive Limit: Not Applicable

Lower Flammable or Explosive Limit: Not Applicable

Extinguishing Media:
Non-combustible

USE: Not applicable. Use suitable extinguishing media for surrounding materials and type of fire.

Fire Fighting Instructions:
Firefighters must wear full face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. Fumes from fire are hazardous. Isolate runoff to prevent environmental pollution.

Unusual Fire Hazards:

Aluminum oxide may have an exothermic reaction, above 200 deg C, with halocarbon vapors and may produce toxic hydrochloric acid and phosgene.

SECTION 5 : Health Hazards

Applies to All Ingredients:

Route of Exposure:

Inhalation: Yes
Skin: No
Eyes: No
Ingestion: No
Other: No

Potential Health Effects:

(ACUTE): Aluminum compounds have many commercial uses and are commonly found in industry. Many of these materials are active chemically and thus exhibit dangerous toxic and reactive properties. Inhalation of fine aluminum oxide particles is associated with Shaver's disease. (Sax, Dangerous Properties of Industrial Materials, eighth edition)

Eye Contact:

Acute: Dust may cause eye irritation.

Skin Contact:

Acute: No acute health effects recorded.

Inhalation:

Acute: Toxic by inhalation of dust. Inhalation of finely divided dust may cause coughing, mucous production and shortness of breath.

Ingestion:

Acute: No acute health effects recorded.

Chronic Health Effects:

Aluminum compounds have many commercial uses and are commonly found in industry. Many of these materials are active chemically and thus exhibit dangerous toxic and reactive properties. Inhalation of fine aluminum oxide particles is associated with Shaver's disease. (Sax, Dangerous Properties of Industrial Materials, eighth edition)

Chronic Eye Contact:

a
No chronic health effects recorded.

Chronic Skin Contact:
  No chronic health effects recorded

Chronic Inhalation:
  Inhalation of finely divided dust may cause lung damage affecting breathing capacity.

Chronic Ingestion:
  No chronic health effects recorded.

Carcinogenicity:
  Questionable carcinogen with experimental neoplastic and tumorogenic data by implantation.

OSHA Designation: Regulated: No
NTP Designation: No
IARC Designation: Monographs: No

Target Organs:
  May affect the lungs and respiratory system.

Signs/Symptoms:
  INHALATION: May cause cough, mucous production and shortness of breath.
  INGESTION: No acute or chronic health effects recorded.
  SKIN: No acute or chronic health effects recorded.
  EYE: May cause redness, itching, burning and watering.

Other Potential Health Effects:
  Questionable carcinogen with experimental neoplastic and tumorogenic data by implantation.

Aggravation of Pre-Existing Conditions:
  Pre-existing respiratory disorders.
  RECOMMENDED EXPOSURE LIMITS: See "Section 2"

Applies to All Ingredients:

Acute Health Effects:
  LD50: Not Established

Inhalation Effects:
  LC50: Not Established

SECTION 6: Emergency And First Aid Procedures

Eye Contact:
  Flush eyes with lukewarm water, lifting upper and lower eyelids, for at least 15 minutes. Seek medical attention.

Skin Contact:
  Not applicable

Inhalation:
  Remove victim to fresh air; keep warm and quiet; give oxygen if breathing is difficult and seek medical attention if symptoms persist.

Ingestion:
  Not applicable

SECTION 7: Reactivity Data

Chemical Stability:
  Stable

Conditions to Avoid:
  INSTABILITY: None

Incompatibilities with Other Materials:
  MATERIALS TO AVOID: Chlorine trifluoride, ethylene oxide, halocarbons, oxygen difluoride, sodium nitrate and vinyl acetate.

Hazardous Polymerization:
Will not occur
CONDITIONS TO AVOID: None

Hazardous Decomposition Products:
Aluminum, hydrochloric acid and phosgene

SECTION 8: Precautions For Safe Handling

Personal Precautions:
Wear appropriate respiratory and protective equipment specified in section 9—Control Measures.

Spill Cleanup Measures:
Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for proper disposal.

Other Precautions:
None

Handling:
None

Hygiene Practices:
WORK/HYGIENIC/MAINTENANCE PRACTICES: Implement engineering and work practice controls to reduce and maintain concentration of exposure at low levels. Use good housekeeping and sanitation practices. Do not use tobacco or food in work area. Wash thoroughly before eating and smoking. Do not blow dust off clothing or skin with compressed air.

HAZARD LABEL INFORMATION:
Store in cool, dry area. Store in tightly sealed container. Wash thoroughly after handling.

Waste Disposal:
Dispose of in accordance with local, state and federal regulations.

RCRA Hazard Class:
RCRA WASTE ID CODE: Not Applicable

DOT Subpart E Labeling Requirement: HAZARD LABEL: No data.

SECTION 9: Control Measures

Ventilation System:
Special: None
Mechanical (Gen): No special ventilation requirements.

Local Exhaust:
If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Other Exhaust Information:
None

Personal Protective Equipment
Routine Handling:

PROTECTIVE EQUIPMENT SUMMARY - HAZARD LABEL INFORMATION:
NIOSH approved respirator. Impervious gloves. Safety glasses.

Hand Protection Description:

PROTECTIVE GLOVES: Rubber or vinyl disposable gloves

Eye/Face Protection:
Safety glasses

Protective Clothing/Body Protection:
Protective clothing not necessary for aluminum oxide

Respiratory Protection:
(SPECIFY TYPE): NIOSH — approved respirator

Exposure Limits:
See "Section 2"
WORK/HYGIENIC/MAINTENANCE PRACTICES:
Implement engineering and work practice controls to reduce and maintain concentration of exposure at low levels.
Use good housekeeping and sanitation practices. Do not use tobacco or food in work area. Wash thoroughly before eating and smoking. Do not blow dust off clothing or skin with compressed air.

SECTION 10: Other Information

Aluminum oxide:
Section 302 (Yes/No): No
Section 304 CERCLA RQ: No
Section 313 Toxic Release Form (Yes/No): Yes
See SECTION 10—Other Information:
Section 302 (Yes/No): No
Section 304 CERCLA RQ: No
Section 313 Toxic Release Form (Yes/No): No

HMIS:
Health Hazard: 1
Fire Hazard: 0
Reactivity: 0
Personal Protection: E

MSDS Revision Date:
06/25/2008
Supersedes: 06/22/2006
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Disclaimer:
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Control of Substances Hazardous to Health Regulations
EH40 Occupational Exposure Limits
Maximum Exposure Limit: Not Established
Occupational Exposure Standard: 10 mg/m3 Total Inhalable Dust
5 mg/m3 Respirable Dust

Abbreviations used:
NA = Not Applicable
NE = Not Established

HMIS HAZARD RATINGS:
Minimal: 0
Slight: 1
Moderate: 2
Serious: 3
Extreme: 4

ADDENDUM: Other Client Information

Notes:

Notes: