Material Safety Data Sheet
Aluminium oxide, activated, neutral, Brockmann I

Section 1 - Chemical Product and Company Identification
MSDS Name: Aluminium oxide, activated, neutral, Brockmann I
Catalog Numbers: 36668-0000, 36668-0010, 36668-0025, 36668-0050
Synonyms: Alumina

Company Identification: Acros Organics BVBA
Janssen Pharmaceuticalaan 3a
2440 Geel, Belgium

Company Identification: (USA)
Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

For information in the US, call: 800-ACROS-01
For information in Europe, call: +32 14 57 52 11
Emergency Number, Europe: +32 14 57 52 99
Emergency Number US: 201-796-7100
CHEMTREC Phone Number, US: 800-424-9300
CHEMTREC Phone Number, Europe: 703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#  Chemical Name: % EINECS#
1344-28-1 Aluminium oxide  215-691-6

Hazard Symbols: None listed
Risk Phrases: None listed

Section 3 - Hazards Identification
EMERGENCY OVERVIEW
Not available

Potential Health Effects
Eye: May cause eye irritation.
Skin: May cause skin irritation. May be harmful if absorbed through the skin.
Ingestion: May cause irritation of the digestive tract. May be harmful if swallowed.
Inhalation: May cause respiratory tract irritation. May be harmful if inhaled.
Chronic: Chronic exposure may cause lung damage.

Section 4 - First Aid Measures
Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin: Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion: Get medical aid. Wash mouth out with water.

Inhalation: Remove from exposure and move to fresh air immediately.

Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Substance is noncombustible.

Extinguishing Media: Use extinguishing media most appropriate for the surrounding fire.

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container.

Section 7 - Handling and Storage

Handling: Avoid breathing dust, vapor, mist, or gas. Avoid contact with skin and eyes.

Storage: Store in a cool, dry place. Store in a tightly closed container.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

CAS# 1344-28-1:

United States OSHA: 15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction)
Belgium - TWA: 10 mg/m3 VLE (as Al)
France - VME: 10 mg/m3 VME

Japan: 0.5 mg/m3 OEL (respirable dust); 2 mg/m3 OEL (total dust)
Malaysia: 10 mg/m3 TWA (particulate matter containing no asbestos and <1% crystalline sili
Netherlands: 10 mg/m3 MAC
Russia: 6 mg/m3 TWA (aerosol)
Spain: 10 mg/m³ VLA-ED

Personal Protective Equipment

Eyes: Wear chemical splash goggles.
Skin: Wear appropriate protective gloves to prevent skin exposure.
Clothing: Wear appropriate protective clothing to prevent skin exposure.

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Powder
Color: white
Odor: Not available
pH: 6.5-7.5 (5% aq. susp. stirred)
Vapor Pressure: Not available
Viscosity: Not available
Boiling Point: 2977 deg C @760mmHg (5,390.60°F)
Freezing/Melting Point: 2030 deg C (3,686.00°F)
Autoignition Temperature: Not available
Flash Point: Not available
Explosion Limits: Lower: Not available
Explosion Limits: Upper: Not available
Decomposition Temperature: Not available
Solubility in water: Not available
Specific Gravity/Density:
Molecular Formula: Al₂O₃
Molecular Weight: 101.96

Section 10 - Stability and Reactivity

Chemical Stability: Stable.
Conditions to Avoid: Incompatible materials, exposure to moist air or water.
Incompatibilities with Other Materials: Ethylene oxide, halogenated agents, nitrates, oxygen difluoride, vinyl acetate.
Hazardous Decomposition Products: Aluminum oxide.
Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information
RTECS#: CAS# 1344-28-1: BD1200000

LD50/LC50: RTECS: Not available. Other: Oral, rat: LD50 = >5000 mg/kg
Aluminium oxide - Not listed as a carcinogen by ACGIH, IARC, NTP, or
Carcinogenicity: CA Prop 65.

Other: Mutagenicity: Ames-test: negative.

Section 12 - Ecological Information

Not available

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

<table>
<thead>
<tr>
<th>IATA</th>
<th>IMO</th>
<th>RID/ADR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not available</td>
<td>Not available</td>
<td>Not available</td>
</tr>
</tbody>
</table>

Section 15 - Regulatory Information

European/International Regulations
European Labeling in Accordance with EC Directives
Hazard Symbols: Not available
Risk Phrases:
Safety Phrases:
S 24/25 Avoid contact with skin and eyes.

WKG (Water Danger/Protection)
CAS# 1344-28-1: 0

Canada
CAS# 1344-28-1 is listed on Canada's DSL List
</ TD>

US Federal
TSCA
CAS# 1344-28-1 is listed on the TSCA Inventory.

Section 16 - Other Information
MSDS Creation Date: 7/16/2002
Revision #0 Date Original.
The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantibility or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

--------------------------------------------------------------------------------