# International Chemical Safety Cards

## ALUMINUM OXIDE

**ICSC:** 0351

**ALUMINUM OXIDE**
- Alpha-Aluminum oxide
- Alumina
- Aluminum trioxide
- $\text{Al}_2\text{O}_3$

**Molecular mass:** 101.9

**CAS #** 1344-28-1  
**RTECS #** BD1200000  
**ICSC #** 0351

### TYPES OF HAZARD/EXPOSURE

<table>
<thead>
<tr>
<th>HAZARD/EXPOSURE</th>
<th>ACUTE HAZARDS/SYMPTOMS</th>
<th>PREVENTION</th>
<th>FIRST AID/FIRE FIGHTING</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIRE</td>
<td>Not combustible.</td>
<td></td>
<td>In case of fire in the surroundings: all extinguishing agents allowed.</td>
</tr>
<tr>
<td>EXPLOSION</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INHALATION</td>
<td>Cough.</td>
<td>PREVENT DISPERSION OF DUST!</td>
<td>Fresh air, rest.</td>
</tr>
<tr>
<td>SKIN</td>
<td>Redness.</td>
<td>Local exhaust or breathing protection.</td>
<td></td>
</tr>
<tr>
<td>EYES</td>
<td></td>
<td>Safety goggles or eye protection in combination with breathing protection.</td>
<td>First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.</td>
</tr>
<tr>
<td>INGESTION</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### SPILLAGE DISPOSAL

Sweep spilled substance into containers. Wash away remainder with plenty of water. Sweep gently to avoid raising dust (extra personal protection: P1 filter respirator for inert particles).

### STORAGE


### PACKAGING & LABELLING

**SEE IMPORTANT INFORMATION ON BACK**

Prepared in the context of cooperation between the International Programme on Chemical Safety & the Commission of the European Communities © IPCS CEC 1993

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PHYSICAL STATE; APPEARANCE:
WHITE POWDER.

PHYSICAL DANGERS:

CHEMICAL DANGERS:

OCCUPATIONAL EXPOSURE LIMITS
(OELs):
TLV (as Al): ppm; 10 mg/m³ total dust
containing no asbestos and <1% crystalline
silica (as TWA) (ACGIH 1993-1994).

DATA
PDK: 6 mg/m³ F (USSR 1988).
MAK: ppm; 6 mg/m³; a (1991).

ROUTE OF EXPOSURE:
The substance can be absorbed into the
body by inhalation of its aerosol.

INHALATION RISK:
Evaporation at 20°C is negligible; a
harmful concentration of airborne particles
can, however, be reached quickly.

EFFECTS OF SHORT-TERM
EXPOSURE:
Inhalation of high concentrations of dusts of
this substance may cause eyes and upper
respiratory tract irritation.

EFFECTS OF LONG-TERM OR
REPEATED EXPOSURE:

PHYSICAL
PROPERTIES
Boiling point: 2980°C
Melting point: 2072°C
Relative density (water = 1): 4.0

Solubility in water: insoluble
Vapour pressure, kPa at 2158°C: 0.1

ENVIRONMENTAL
DATA

NOTES
There is a different and hard crystalline form of aluminum oxide which occurs abundantly in nature under the
name corundum (1302-74-5). Other melting points: 2015°C (approx.) (corundum).

ADDITIONAL INFORMATION

ICSC: 0351
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IMPORTANT
LEGAL
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