
SAFETY DATA SHEET

Aluminum Oxide Powder, 100g, Part number 393706201

Section 1. Identification

1.1 Product identifier
Product name : Aluminum Oxide Powder, 100g, Part number 393706201
Part no. : 393706201
Validation date : 3/28/2019

1.2 Relevant identified uses of the substance or mixture and uses advised against
Material uses : Reagents and Standards for Analytical Chemistry Laboratory Use
100 g

1.3 Details of the supplier of the safety data sheet
Supplier/Manufacturer : Agilent Technologies, Inc.
5301 Stevens Creek Blvd
Santa Clara, CA 95051, USA
800-227-9770

1.4 Emergency telephone number
In case of emergency : CHEMTREC®: 1-800-424-9300

Section 2. Hazards identification

2.1 Classification of the substance or mixture
OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture

H372 : SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (lungs) - Category 1

Ingredients of unknown toxicity : Percentage of the mixture consisting of ingredient(s) of unknown acute dermal toxicity: 1 - 10%
Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: > 60%
Percentage of the mixture consisting of ingredient(s) of unknown acute oral toxicity: 1 - 10%
Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 9.9%

2.2 GHS label elements
Hazard pictograms : 

Signal word : Danger
Hazard statements : H372 - Causes damage to organs through prolonged or repeated exposure. (lungs)
Precautionary statements : Prevention : P260 - Do not breathe dust or mist. P270 - Do not eat, drink or smoke when using this product. P264 - Wash hands thoroughly after handling.
Response : P314 - Get medical attention if you feel unwell.

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Section 2. Hazards identification

**Storage**: Not applicable.

**Disposal**: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

### 2.3 Other hazards

**Hazards not otherwise classified**: None known.

Section 3. Composition/information on ingredients

**Substance/mixture**: Mixture

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>%</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Talc, not containing asbestiform fibres</td>
<td>≤10</td>
<td>14807-96-6</td>
</tr>
</tbody>
</table>

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

#### 4.1 Description of necessary first aid measures

**Eye contact**: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell.

**Inhalation**: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention following exposure or if feeling unwell. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

**Skin contact**: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell. Wash clothing before reuse. Clean shoes thoroughly before reuse.

**Ingestion**: Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention following exposure or if feeling unwell. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

#### 4.2 Most important symptoms/effects, acute and delayed

**Potential acute health effects**

**Eye contact**: Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.

**Inhalation**: Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.

**Skin contact**: No known significant effects or critical hazards.

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Section 4. First aid measures

**Ingestion**
No known significant effects or critical hazards.

**Over-exposure signs/symptoms**

- **Eye contact**
  Adverse symptoms may include the following:
  - irritation
  - redness

- **Inhalation**
  Adverse symptoms may include the following:
  - respiratory tract irritation
  - coughing

- **Skin contact**
  No specific data.

- **Ingestion**
  No specific data.

**4.3 Indication of immediate medical attention and special treatment needed, if necessary**

- **Notes to physician**
  Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

- **Specific treatments**
  No specific treatment.

- **Protection of first-aiders**
  No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

**5.1 Extinguishing media**

- **Suitable extinguishing media**
  Use an extinguishing agent suitable for the surrounding fire.

- **Unsuitable extinguishing media**
  None known.

**5.2 Special hazards arising from the substance or mixture**

- **Specific hazards arising from the chemical**
  No specific fire or explosion hazard.

- **Hazardous thermal decomposition products**
  Decomposition products may include the following materials:
  - metal oxide/oxides

**5.3 Advice for firefighters**

- **Special protective actions for fire-fighters**
  Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

- **Special protective equipment for fire-fighters**
  Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

**6.1 Personal precautions, protective equipment and emergency procedures**

- **For non-emergency personnel**
  No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing dust. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

- **For emergency responders**
  If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

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Section 6. Accidental release measures

6.2 Environmental precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up: Move containers from spill area. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

7.1 Precautions for safe handling

Protective measures: Put on appropriate personal protective equipment (see Section 8). Do not breathe dust. Do not ingest. Avoid contact with eyes, skin and clothing. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

Recommendations: Industrial applications, Professional applications.

Industrial sector specific solutions: Not applicable.

Section 8. Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Talc, not containing asbestiform fibres</td>
<td>OSHA PEL 1989 (United States, 3/1989).   TWA: 2 mg/m³ 8 hours. Form: Respirable dust</td>
</tr>
<tr>
<td>Talc, not containing asbestiform fibres</td>
<td>NIOSH REL (United States, 10/2016).    TWA: 2 mg/m³ 10 hours. Form: Respirable fraction</td>
</tr>
<tr>
<td>Talc, not containing asbestiform fibres</td>
<td>ACGIH TLV (United States, 3/2018).     TWA: 2 mg/m³ 8 hours. Form: Respirable fraction</td>
</tr>
</tbody>
</table>

8.2 Exposure controls
Section 8. Exposure controls/personal protection

**Hand protection**
When used as intended with Agilent instruments, the use of the product under normal laboratory conditions and with other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

**Eye/face protection**
While not required when used as intended with Agilent instruments, as part of standard laboratory practice, protective gloves should be worn.

**Respiratory protection**
Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields. If operating conditions cause high dust concentrations to be produced, use dust goggles.

**Body protection**
Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Other skin protection**
Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection**
When used as intended with Agilent instruments, the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures, and, therefore, respiratory protection isn’t needed. In emergency situations, when a respirator is needed, use a full-face supplied air respirator and components tested and approved under appropriate government standards such as CEN (EU) or NIOSH (US).

Section 9. Physical and chemical properties

**9.1 Information on basic physical and chemical properties**

**Appearance**

- **Physical state**: Solid. [Powder. / Crystals.]
- **Color**: White.
- **Odor**: Not available.
- **Odor threshold**: Not available.
- **pH**: Not available.
- **Melting point**: 2050°C (3722°F)
- **Boiling point**: 2977°C (5390.6°F)
- **Flash point**: Not available.
- **Evaporation rate**: Not available.
- **Flammability (solid, gas)**: Not available.
- **Lower and upper explosive (flammable) limits**: Not available.
Section 9. Physical and chemical properties

Vapor pressure: Not available.
Vapor density: Not available.
Relative density: 3.5
Solubility: Insoluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water: Not available.
Auto-ignition temperature: Not available.
Decomposition temperature: Not available.
Viscosity: Not available.

Section 10. Stability and reactivity

10.1 Reactivity: No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability: The product is stable.
10.3 Possibility of hazardous reactions: Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid: No specific data.
10.5 Incompatible materials: May react or be incompatible with oxidizing materials.
Incompatible with: acids, alkalis, halogenated hydrocarbons.
10.6 Hazardous decomposition products: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity
Not available.

Irritation/Corrosion
Not available.

Conclusion/Summary
Skin: May cause skin irritation.
Eyes: May cause eye irritation.

Mutagenicity
Conclusion/Summary: Not available.

Carcinogenicity
Conclusion/Summary: Not available.

Classification

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>OSHA</th>
<th>IARC</th>
<th>NTP</th>
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<td>3</td>
<td>-</td>
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</tbody>
</table>

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Section 11. Toxicological information

Reproductive toxicity
Conclusion/Summary : Not available.

Teratogenicity
Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)
Not available.

Specific target organ toxicity (repeated exposure)

<table>
<thead>
<tr>
<th>Name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
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<tbody>
<tr>
<td>Talc , not containing asbestiform fibres</td>
<td>Category 1</td>
<td>Not determined</td>
<td>lungs</td>
</tr>
</tbody>
</table>

Aspiration hazard
Not available.

Information on the likely routes of exposure
Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

Eye contact : Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.

Inhalation : Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
irritation
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Skin contact : No specific data.

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure
Potential immediate effects : Not available.
Potential delayed effects : Not available.

Long term exposure
Potential immediate effects : Not available.
Potential delayed effects : Not available.

Potential chronic health effects
General : Causes damage to organs through prolonged or repeated exposure. Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

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## Section 11. Toxicological information

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teratogenicity</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Developmental effects</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Fertility effects</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

**Numerical measures of toxicity**

**Acute toxicity estimates**

N/A

**Other information**

- Adverse symptoms may include the following: pulmonary fibrosis

## Section 12. Ecological information

### 12.1 Toxicity

Not available.

### 12.2 Persistence and degradability

**Conclusion/Summary**

Since most inorganic products are not biodegradable, please check your product's data for the toxicity of the products of biodegradation.

### 12.3 Bioaccumulative potential

Not available.

### 12.4 Mobility in soil

**Soil/water partition coefficient \( K_{OC} \)**

Not available.

### 12.5 Other adverse effects

No known significant effects or critical hazards.

## Section 13. Disposal considerations

### 13.1 Waste treatment methods

**Disposal methods**

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

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Section 13. Disposal considerations

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

Section 14. Transport information

DOT / TDG / Mexico / IMDG / IATA : Not regulated.

Special precautions for user : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL and the IBC Code : Not available.

Section 15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

U.S. Federal regulations : TSCA 8(a) CDR Exempt/Partial exemption: Not determined

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed
Clean Air Act Section 602 Class I Substances : Not listed
Clean Air Act Section 602 Class II Substances : Not listed
DEA List I Chemicals (Precursor Chemicals) : Not listed
DEA List II Chemicals (Essential Chemicals) : Not listed
SARA 302/304
Composition/information on ingredients
No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312
Classification : SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (lungs) - Category 1

Composition/information on ingredients

<table>
<thead>
<tr>
<th>Name</th>
<th>%</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Talc, not containing asbestiform fibres</td>
<td>≤10</td>
<td>SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (lungs) - Category 1</td>
</tr>
</tbody>
</table>

State regulations

Massachusetts : The following components are listed: ALUMINUM OXIDE; TALC; SOAPSTONE
New York : None of the components are listed.
New Jersey : The following components are listed: ALUMINUM OXIDE; alpha-ALUMINA; SOAPSTONE
Pennsylvania : The following components are listed: ALUMINUM OXIDE; TALC; SOAPSTONE DUST

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Section 15. Regulatory information

California Prop. 65

This product does not require a Safe Harbor warning under California Prop. 65.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

<table>
<thead>
<tr>
<th>Country</th>
<th>Status</th>
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<tbody>
<tr>
<td>Australia</td>
<td>All components are listed or exempted.</td>
</tr>
<tr>
<td>Canada</td>
<td>All components are listed or exempted.</td>
</tr>
<tr>
<td>China</td>
<td>All components are listed or exempted.</td>
</tr>
<tr>
<td>Europe</td>
<td>All components are listed or exempted.</td>
</tr>
<tr>
<td>Japan</td>
<td>Japan inventory (ENCS): All components are listed or exempted.</td>
</tr>
<tr>
<td>New Zealand</td>
<td>All components are listed or exempted.</td>
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<tr>
<td>Philippines</td>
<td>All components are listed or exempted.</td>
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<td>Republic of Korea</td>
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<td>Taiwan</td>
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<td>Thailand</td>
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<td>Viet Nam</td>
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Section 16. Other information

History

<table>
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<tr>
<th>Category</th>
<th>Details</th>
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<tbody>
<tr>
<td>Date of issue</td>
<td>03/28/2019</td>
</tr>
<tr>
<td>Date of previous issue</td>
<td>09/26/2018</td>
</tr>
<tr>
<td>Version</td>
<td>7</td>
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</table>

Key to abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATE</td>
<td>Acute Toxicity Estimate</td>
</tr>
<tr>
<td>BCF</td>
<td>Bioconcentration Factor</td>
</tr>
<tr>
<td>GHS</td>
<td>Globally Harmonized System of Classification and Labelling of Chemicals</td>
</tr>
<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
</tr>
<tr>
<td>IBC</td>
<td>Intermediate Bulk Container</td>
</tr>
<tr>
<td>IMDG</td>
<td>International Maritime Dangerous Goods</td>
</tr>
<tr>
<td>LogPow</td>
<td>Logarithm of the octanol/water partition coefficient</td>
</tr>
<tr>
<td>MARPOL</td>
<td>International Convention for the Prevention of Pollution From Ships, 1973</td>
</tr>
<tr>
<td></td>
<td>as modified by the Protocol of 1978. (&quot;Marpol&quot; = marine pollution)</td>
</tr>
<tr>
<td>N/A</td>
<td>Not available</td>
</tr>
<tr>
<td>UN</td>
<td>United Nations</td>
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</table>

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Section 16. Other information

Procedure used to derive the classification

<table>
<thead>
<tr>
<th>Classification</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (lungs) - Category 1</td>
<td>Calculation method</td>
</tr>
</tbody>
</table>

 Indicates information that has changed from previously issued version.

Notice to reader

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