



## SAFETY DATA SHEET

Date: June 2015

### Section #1: PRODUCT AND COMPANY IDENTIFICATION

Lapmaster Wolters, LLC  
501 W. Algonquin Road  
Mt. Prospect, IL 60056

[www.lapmaster.com](http://www.lapmaster.com)

Telephone: (224) 659-7101 (Office Hours 8:00 a.m. to 5:30 p.m. CST)  
24-Hour Emergency Number: Chemtrec – 1-800-424-9300

Product Identification: Abrasive Powder  
Product Name: Brown Fused Aluminum Oxide  
Product Use: Aluminum Oxide Abrasive Powder to Lap/Polish Components

### SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**  
Classifications listed also are applicable to the OSHA GHS Hazard Communication Standard (29CFR1910.1200).  
The following classifications are applicable only to OSHA (USA) regulations and not the specific CLP regulation: H351.



health hazard (US GHS only)

Carc. 2 H351: Suspected of causing cancer.

The product is not classified as hazardous according to the CLP regulation.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC** Not applicable.
- **Information concerning particular hazards for human and environment:**  
The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

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# Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and  
OSHA GHS

Printing date 17.03.2015

Revision: 17.03.2015

**Trade name: MICROGRADED ALUNDUM®**  
**BROWN FUSED ALUNDUM® MICROGRITS**  
**BROWN FUSED ALUMINUM OXIDE**  
**BROWN ALUMINUM OXIDE;**  
**DAO**

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- **Classification system:**

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

The classification is in accordance with the latest editions of international substances lists, and is supplemented by information from technical literature and by information provided by the company.

- **Additional information:**

Long term inhalation of product dust may be harmful.

There are no other hazards not otherwise classified that have been identified.

0 percent of the mixture consists of component(s) of unknown toxicity

- **2.2 Label elements**

- **Labelling according to Regulation (EC) No 1272/2008**

This product does not have a classification according to the CLP regulation.

The substance is classified and labelled according to the Globally Harmonized System within the United States (GHS).

- **Hazard pictograms**



health hazard (US GHS only)

- **Signal word**

WARNING

Applicable only within the United States (USA)

- **Hazard-determining components of labelling:**

titanium dioxide

- **Hazard statements**

The following Hazard Statements are applicable only according to OSHA regulations within the United States. These Statements are not applicable for the CLP regulation (1272/2008/EC) in the EU: H351.

H351: Suspected of causing cancer.

- **Precautionary statements**

Applicable only within the United States (USA)

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Hazard description:**

- **WHMIS-symbols:** Not hazardous under WHMIS.

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· **NFPA ratings (scale 0 - 4)**



· **HMIS-ratings (scale 0 - 4)**



\* - Indicates a long term health hazard from repeated or prolonged exposures.

· **HMIS Long Term Health Hazard Substances**

|            |                  |
|------------|------------------|
| 13463-67-7 | titanium dioxide |
|------------|------------------|

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

## SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**

· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

|   |  |        |
|---|--|--------|
| CAS: 1344-28-1<br>EINECS: 215-691-6                               | aluminium oxide<br>substance with a Community workplace exposure limit                             | > 88%  |
| CAS: 13463-67-7<br>EINECS: 236-675-5                              | titanium dioxide<br>substance with a Community workplace exposure limit                            | < 6%   |
| CAS: 1309-37-1<br>EINECS: 215-168-2                               | diiron trioxide / iron (III) oxide<br>substance with a Community workplace exposure limit          | < 5%   |
| CAS: 1305-78-8<br>EINECS: 215-138-9                               | calcium oxide<br>Xi R37/38-41<br>-----<br>Eye Dam. 1, H318<br>Skin Irrit. 2, H315; STOT SE 3, H335 | < 0,6% |
| CAS: 1309-48-4<br>EINECS: 215-171-9<br>Index number: 025-199-09-0 | magnesium oxide<br>substance with a Community workplace exposure limit                             | < 0,5% |

· **Dangerous Components (Alternative Classifications):**

based on IARC classification.

|                                      |                  |               |      |
|--------------------------------------|------------------|---------------|------|
| CAS: 13463-67-7<br>EINECS: 236-675-5 | titanium dioxide | Carc. 2, H351 | < 6% |
|--------------------------------------|------------------|---------------|------|

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· **Additional information:** For the wording of the listed risk phrases refer to section 16.

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## SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**  
Wash with soap and water.  
If skin irritation is experienced, consult a doctor.
- **After eye contact:**  
Remove contact lenses if worn.  
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:**  
Rinse out mouth and then drink plenty of water.  
Do not induce vomiting; call for medical help immediately.
- **4.2 Most important symptoms and effects, both acute and delayed** Coughing
- **Hazards**  
Danger of impaired breathing.  
Suspected of causing cancer. Route of exposure: Inhalative.
- **4.3 Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

## SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**  
The product is not flammable.  
Use fire extinguishing methods suitable to surrounding conditions.
- **For safety reasons unsuitable extinguishing agents:** None.
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:**  
Wear self-contained respiratory protective device.  
Wear fully protective suit.
- **Additional information** No further relevant information available.

## SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Ensure adequate ventilation

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- For large spills, wear protective clothing.  
 For large spills, use respiratory protective device against the effects of fumes/dust/aerosol.
- **6.2 Environmental precautions:** No special measures required.
  - **6.3 Methods and material for containment and cleaning up:**  
 Pick up mechanically.  
 Dispose contaminated material as waste according to item 13.  
 Send for recovery or disposal in suitable receptacles.
  - **6.4 Reference to other sections**  
 See Section 7 for information on safe handling.  
 See Section 8 for information on personal protection equipment.  
 See Section 13 for disposal information.

## SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**  
 Use only in well ventilated areas.  
 Prevent formation of dust.  
 Any unavoidable deposit of dust must be regularly removed.  
 Take note of emission threshold.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:**  
 Store away from foodstuffs.  
 Do not store together with acids.  
 Do not store together with alkalis (caustic solutions).
- **Further information about storage conditions:** Store in dry conditions.
- **7.3 Specific end use(s)** No further relevant information available.

## SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

**1344-28-1 aluminium oxide**

|           |   |
|-----------|---|
| PEL (USA) | Long-term value: 15*; 15** mg/m <sup>3</sup><br>*Total dust; ** Respirable fraction |
|-----------|---|

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|             |  |
|-------------|--|
| REL (USA)   | Long-term value: 10* 5** mg/m <sup>3</sup><br>as Al*Total dust**Respirable/pyro powd./welding f. |
| TLV (USA)   | Long-term value: 1* mg/m <sup>3</sup><br>as Al; *as respirable fraction                          |
| EL (Canada) | Long-term value: 1,0 mg/m <sup>3</sup><br>respirable, as Al                                      |
| EV (Canada) | Long-term value: 10 mg/m <sup>3</sup><br>total dust  |

**13463-67-7 titanium dioxide**

|             |  |
|-------------|--|
| PEL (USA)   | Long-term value: 15* mg/m <sup>3</sup><br>*total dust                                    |
| REL (USA)   | See Pocket Guide App. A  |
| TLV (USA)   | Long-term value: 10 mg/m <sup>3</sup><br>withdrawn from NIC                              |
| EL (Canada) | Long-term value: 10* 3** mg/m <sup>3</sup><br>*total dust;**respirable fraction; IARC 2B |
| EV (Canada) | Long-term value: 10 mg/m <sup>3</sup><br>total dust                                      |

**1309-37-1 diiron trioxide / iron (III) oxide**

|             |  |
|-------------|--|
| PEL (USA)   | Long-term value: 10* 15** 5*** mg/m <sup>3</sup><br>*Fume; Rouge: **Total dust, ***respirable  |
| REL (USA)   | Long-term value: 5 mg/m <sup>3</sup><br>Dust & fume, as Fe   |
| TLV (USA)   | Long-term value: 5* mg/m <sup>3</sup><br>*as respirable fraction   |
| EL (Canada) | Short-term value: 10** mg/m <sup>3</sup><br>Long-term value: 5* 10*** 3**** mg/m <sup>3</sup><br>*dust & fume**fume; Rouge: ***total dust****resp. |
| EV (Canada) | Long-term value: 5* 10** mg/m <sup>3</sup><br>*respirable, including Rouge;**total dust  |

**1305-78-8 calcium oxide**

|             |                                      |
|-------------|--------------------------------------|
| PEL (USA)   | Long-term value: 5 mg/m <sup>3</sup> |
| REL (USA)   | Long-term value: 2 mg/m <sup>3</sup> |
| TLV (USA)   | Long-term value: 2 mg/m <sup>3</sup> |
| EL (Canada) | Long-term value: 2 mg/m <sup>3</sup> |
| EV (Canada) | Long-term value: 2 mg/m <sup>3</sup> |

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**1309-48-4 magnesium oxide**

|             |  |
|-------------|--|
| PEL (USA)   | Long-term value: 15* mg/m <sup>3</sup><br>fume; *total particulate   |
| TLV (USA)   | Long-term value: 10* mg/m <sup>3</sup><br>*as inhalable fraction   |
| EL (Canada) | Short-term value: 10** mg/m <sup>3</sup><br>Long-term value: 10* 3** mg/m <sup>3</sup><br>*inhalable fume;**respirable dust and fume |
| EV (Canada) | Long-term value: 10 mg/m <sup>3</sup><br>inhalable   |

- **DNELs** No further relevant information available.
- **PNECs** No further relevant information available.
- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
The usual precautionary measures are to be adhered to when handling chemicals.  
Keep away from foodstuffs, beverages and feed.  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes.  
Do not inhale dust / smoke / mist.
- **Respiratory protection:**  
Suitable respiratory protective device recommended.  
Use respiratory protection when grinding or cutting material.  
For large spills, respiratory protection may be advisable.
- **Protection of hands:**  
No chemical-protective gloves required.  
Wear gloves for the protection against mechanical hazards according to NIOSH or EN 388.
- **Eye protection:**



Safety glasses

- **Body protection:** Protection may be required for spills.
- **Limitation and supervision of exposure into the environment**  
No further relevant information available.
- **Risk management measures**  
See Section 7 for additional information.  
No further relevant information available.

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## SECTION 9: Physical and chemical properties

### · 9.1 Information on basic physical and chemical properties

#### · General Information

#### · Appearance:

**Form:** Powder  
Granulate

**Colour:** Grey  
Dark brown

· **Odour:** Odourless

· **Odour threshold:** Not determined.

· **pH-value:** Not applicable.

#### · Change in condition

**Melting point/Melting range:** >2000 °C (>3632 °F)

**Boiling point/Boiling range:** >2900 °C (>5252 °F)

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Not determined.

· **Auto/Self-ignition temperature:** Not determined.

· **Decomposition temperature:** Not determined.

· **Self-igniting:** Product is not self-igniting.

· **Danger of explosion:** Product does not present an explosion hazard.

#### · Explosion limits:

**Lower:** Not determined.

**Upper:** Not determined.

· **Vapour pressure:** Not applicable.

· **Density at 20 °C (68 °F):** 3,9 g/cm<sup>3</sup> (32,546 lbs/gal)

· **Relative density** Not determined.

· **Vapour density** Not applicable.

· **Evaporation rate** Not applicable.

#### · Solubility in / Miscibility with water:

Insoluble.

· **Partition coefficient (n-octanol/water):** Not determined.

#### · Viscosity:

**Dynamic:** Not applicable.

**Kinematic:** Not applicable.

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- **Solvent content:**
- **Organic solvents:** Not determined.
- **Solids content:** Not determined.
- **9.2 Other information** No further relevant information available.

## SECTION 10: Stability and reactivity

- **10.1 Reactivity**
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions** Reacts with strong acids and alkali.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** Possible in traces.

## SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**
- **LD/LC50 values relevant for classification:** None.
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Mechanical irritation only.
- **Sensitisation:** No sensitising effects known.
- **Acute effects (acute toxicity, irritation and corrosivity):**  
Inhalation may cause irritation to the respiratory system.
- **Repeated dose toxicity:**  
Long-term inhalation of silica dusts may cause obstructive pulmonary disease including silicosis.  
May cause damage to organs through prolonged or repeated exposure.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):**  
Carc. 2A  
Based on IARC classifications and not the CLP classification.

## SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.

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- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
 Not known to be hazardous to water.  
 Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

## SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**  
 Must not be disposed together with household garbage. Do not allow product to reach sewage system.  
 The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

## SECTION 14: Transport information

- **14.1 UN-Number**
- **DOT, ADR, ADN, IMDG, IATA** Not Regulated
- **14.2 UN proper shipping name**
- **DOT, ADR, ADN, IMDG, IATA** Not Regulated
- **14.3 Transport hazard class(es)**
- **DOT, ADR, ADN, IMDG, IATA**
- **Class** Not Regulated
- **14.4 Packing group**
- **DOT, ADR, IMDG, IATA** Not Regulated
- **14.5 Environmental hazards:**
- **Marine pollutant:** No
- **14.6 Special precautions for user** Not applicable.
- **14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

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· UN "Model Regulation":

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## SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- United States (USA)
- SARA

|  |
|--|
| · <b>Section 355 (extremely hazardous substances):</b> |
|--|

|                                     |
|-------------------------------------|
| None of the ingredients are listed. |
|-------------------------------------|

|  |
|--|
| · <b>Section 313 (Specific toxic chemical listings):</b> |
|--|

|                             |
|-----------------------------|
| 1344-28-1   aluminium oxide |
|-----------------------------|

|   |
|---|
| · <b>TSCA (Toxic Substances Control Act):</b> |
|---|

|                             |
|-----------------------------|
| All ingredients are listed. |
|-----------------------------|

|                                       |
|---------------------------------------|
| · <b>Proposition 65 (California):</b> |
|---------------------------------------|

|   |
|---|
| · <b>Chemicals known to cause cancer:</b> |
|---|

|                               |
|-------------------------------|
| 13463-67-7   titanium dioxide |
|-------------------------------|

|  |
|--|
| · <b>Chemicals known to cause reproductive toxicity for females:</b> |
|--|

|                                     |
|-------------------------------------|
| None of the ingredients are listed. |
|-------------------------------------|

|  |
|--|
| · <b>Chemicals known to cause reproductive toxicity for males:</b> |
|--|

|                                     |
|-------------------------------------|
| None of the ingredients are listed. |
|-------------------------------------|

|   |
|---|
| · <b>Chemicals known to cause developmental toxicity:</b> |
|---|

|                                     |
|-------------------------------------|
| None of the ingredients are listed. |
|-------------------------------------|

|                                  |
|----------------------------------|
| · <b>Carcinogenic Categories</b> |
|----------------------------------|

|  |
|--|
| · <b>EPA (Environmental Protection Agency)</b> |
|--|

|                                     |
|-------------------------------------|
| None of the ingredients are listed. |
|-------------------------------------|

|   |
|---|
| · <b>IARC (International Agency for Research on Cancer)</b> |
|---|

|                               |    |
|-------------------------------|----|
| 13463-67-7   titanium dioxide | 2B |
|-------------------------------|----|

|   |
|---|
| · <b>TLV (Threshold Limit Value established by ACGIH)</b> |
|---|

|                             |    |
|-----------------------------|----|
| 1344-28-1   aluminium oxide | A4 |
|-----------------------------|----|

|                               |    |
|-------------------------------|----|
| 13463-67-7   titanium dioxide | A4 |
|-------------------------------|----|

|  |    |
|--|----|
| 1309-37-1   diiron trioxide / iron (III) oxide | A4 |
|--|----|

|   |
|---|
| · <b>NIOSH-Ca (National Institute for Occupational Safety and Health)</b> |
|---|

|                               |
|-------------------------------|
| 13463-67-7   titanium dioxide |
|-------------------------------|

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- **Canada**

- **Canadian Domestic Substances List (DSL)**

All ingredients are listed.

- **Canadian Ingredient Disclosure list (limit 0.1%)**

None of the ingredients are listed.

- **Canadian Ingredient Disclosure list (limit 1%)**

1344-28-1 aluminium oxide

7631-86-9 silicon dioxide, chemically prepared

1309-37-1 diiron trioxide / iron (III) oxide

- **Other regulations, limitations and prohibitive regulations**

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

- **Substances of very high concern (SVHC) according to REACH, Article 57**

None of the ingredients are listed.

- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**

H315 Causes skin irritation.

H318 Causes serious eye damage.

H335 May cause respiratory irritation.

R37/38 Irritating to respiratory system and skin.

R41 Risk of serious damage to eyes.

- **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

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**Trade name: MICROGRADED ALUNDUM®**  
**BROWN FUSED ALUNDUM® MICROGRITS**  
**BROWN FUSED ALUMINUM OXIDE**  
**BROWN ALUMINUM OXIDE;**  
**DAO**

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Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1  
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

## THIS PRODUCT IS CERTIFIED TO BE RoHS COMPLIANT

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