

# WASHINGTON MILLS

## Safety Data Sheet

According to Regulation (EC) No. 1272/2008

Trade name: DURALUM (Aluminium oxide)

Printing date: 18.03.2021

Version: 06  
Revision date: 18.03.21

### 1. Identification of the substance

#### 1.1 Product identifier

**Aluminium oxide, Alumina**

Additional trade names: DURALUM

REACH Registration No.: 01-2119529248-35-0043

#### 1.2 Use of the substance

Industrial use, refractories, abrasives further processing into several articles/products.

#### 1.3 Manufacturer / Supplier:

1.3.1 Company: WASHINGTON MILLS ELECTRO MINERALS LTD.  
Street: 64 MOSLEY ROAD, TRAFFORD PARK  
Postal Code/Location: MANCHESTER M17 1NR  
phone: 0044 (0)161 848 0271  
fax: 0044 (0)161 872 2974

#### 1.3.2 Further information obtainable from:

phone + 00 44 (0)161 873 5512  
E-Mail (expert): seamus@washingtomills.co.uk

#### 1.3.3 Information in case of emergency

Call national emergency number 0161 848 0271.

**Office Hours – 08:00-16:15 Mon-Thurs, 08:00-13:00 Friday**

### 2. Hazards Identification

#### 2.1 Classification

This product is classed as non-hazardous according to the CLP regulation.

#### 2.2 Information concerning hazards for human and environment:

Does not pose any health hazard under normal conditions of use and as delivered.  
High dust concentration may cause mechanical irritation of the eyes, skin and respiratory tract.

### 3. Composition/information on ingredients

#### 3.1 Chemical characterisation:

Aluminium oxide content of > 95 weight by weight %

#### 3.2 Ingredients:

CAS #	EC #	Component	Concentration %	Classification	R- phrase
1344-28-1	215-691-6	Aluminium oxide (non-fibrous)	> 95	--- ---	--- ---

#### 3.3 Additional information:

Usually supplied to customers in 25kg. or big bags. Main impurities iron oxide, sodium oxide, silicon and calcium oxide

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### 4. First-aid measures

#### 4.1 General information:

First aid personnel: pay attention to self- protection!

- **After inhalation:** In case of dust inhalation remove to ventilated area and keep calm. In case of ongoing discomfort consult a physician
- **After skin contact:** In case of large exposures wash with soap and water.
- **After eye contact:** If particles comes into contact with eyes treatment for mechanical irritation or injury may be required; flush thoroughly with water, in case of ongoing discomfort consult a physician.
- **After swallowing:** Wash mouth with water.

#### 4.2 Notes to physician:

None

### 5. Fire-fighting measures

Not flammable.

#### 5.1 Suitable extinguishing agents:

Use extinguishing agents appropriate for surrounding materials.

#### 5.2 For safety reasons unsuitable extinguishing agents:

None

#### 5.3 Special hazards caused by the substance, its products of combustion or resulting gases:

None.

#### 5.4 Protective equipment:

Fire fighters should wear approved personal protective equipment for the surrounding fired material,

#### 5.5 Additional hints:

### 6. Accidental release measures

#### 6.1 Person- related safety precautions:

See protection measures listed in section 8.

#### 6.2 Environmental protection measures:

Avoid dispersal of spilled material and runoff. Avoid creating dusty conditions and prevent wind dispersal. Collect material for recycling if possible.

#### 6.3 Measures for cleaning:

Use vacuum cleaner if possible.

#### 6.4 Additional hints:

See section 13.

### 7. Handling and storage

#### 7.1 Handling:

Ensure good ventilation / local exhaust at the workplace in the case of operations generating dust. Avoid creating dusty conditions. Avoid inhalation and skin and eye contact.

Wear appropriate personal protective equipment. Do not add wet alumina to electrolysis cells.

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### 7.2 Storage

#### Requirements to be met by storerooms and receptacles:

Store in dry area.

#### Additional hints:

None

## 8. Exposure controls/personal protection

### 8.1 Exposure limits

Occupational exposure limits (air): generally same as for nuisance dust

Germany

10\*/3\*\* mg/m<sup>3</sup> (\*inhalable dust; \*\* respirable dust)

Great Britain

10\*/4\*\* mg/m<sup>3</sup> (\*inhalable dust; \*\* respirable dust)

United States

OSHA 15 mg/m<sup>3</sup> (total dust); 5 mg/m<sup>3</sup> TWA (respirable fraction)

Some additional EU countries: 10 mg/m<sup>3</sup> (include national OEL if this exists)

### 8.2 Exposure controls:

Ensure good ventilation / local exhaust at the workplace in the case of operations generating dust. Avoid work practises which generate dust. Avoid inhalation and particles entering the eyes.

### 8.3 Personal protective equipment:

Respiratory equipment: not required under recommended conditions of use. In case dust is generated, use personal protective equipment, dust filter P2 or if fine particles P3.

Use protective goggles and gloves when handling the substance and appropriate work clothes.

### 8.4 Environmental exposure control:

Avoid creating dusty conditions and prevent wind dispersal and dust emissions.

## 9. Physical and chemical properties

### 9.1 General information:

Physical state: solid powder

Colour: white, brown, pink

Odour: odourless

pH- value: not relevant

Melting point/Melting range: approx. 2030°C

Boiling Point/Boiling range: not relevant

Flash point: not relevant

Flammability: not relevant

Explosive properties: not relevant

Density at 20°C: 3,99 g/cm<sup>3</sup>

Solubility in water (20 °C): insoluble

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Other physical–chemical properties: not relevant

### 9.2 Important information on health and safety and environmental protection: Safety related basic data, methods, and comments.

### 10. Stability and reactivity

Stable under normal conditions of use, storage, and transport

#### 10.1 Conditions to be avoided:

None

#### 10.2 Materials to be avoided:

None

#### 10.3 Dangerous decomposition products:

None

### 11. Toxicological information

#### 11.1 Toxicokinetics, metabolism and distribution:

Oral uptake < 0.1%, nearly insoluble in lung fluids, most absorbed aluminium oxide is rapidly excreted through urine, main deposit in body is in bone structure.

#### 11.2 Acute effects (acute toxicity, irritation and corrosivity):

No acute effects

##### 11.2.1 Acute toxicity:

LD50 (oral):	> 5000mg/kg bwt (rats)
LD50 (dermal):	No effect
LC50 (inhalation):	> 5 mg/l(rats)

##### 11.2.2 Specific symptoms in animal tests:

After swallowing:	None
After skin contact:	None
After inhalation:	None

##### 11.2.3 Irritation and Corrosive effects:

Irritant effects on skin:	No effects
Irritant effect on eyes:	No effects apart from mechanical irritation.

##### 11.3 Sensitisation:

After skin contact:	None
After inhalation:	None
Remarks:	

##### 11.4 Toxicity after repeated intake (sub acute, sub chronic, chronic):

Sub acute oral Toxicity:	None, Calculated DNEL 6,2 mg/kg bwt/day
Sub acute inhalation Toxicity:	None- see occupational exposure limits, calculated DNEL:15,6 mg/m <sup>3</sup> respirable.
Assessment:	

##### 11.5 CMR-effects (carcinogenic, mutagenic and reproductive effects)

Carcinogenicity:	None
Mutagenicity:	None

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Reproductive toxicity: None  
Assessment of CMR properties: Not classified for CMR.

Product components not listed under IARC/NTP/ACGIH (ingredient carcinogenicity)

### 11.6 Practical experience:

Observations relevant for classification: none  
Other observations: none

## 12. Ecological Information

### 12.1 Ecotoxicity:

Product/ingredient name	test	result	Species	Exposure
Aluminium oxide	Fish - OECD TG 203	>100 mg/l	Salmo trutta	pH 8
Aluminium oxide	Daphnia - OECD TG 202	>100mg/l	Daphnia Magna	pH 8
Aluminium oxide	Algae - OECD TG 201	>100mg/l	Selenastrum Capricornutum	pH 8

**12.2 Mobility:** Not mobile under normal environmental conditions may be leached from the ground at low pH (< 5.5) or high pH (> 8.5).

### 12.3 Persistence and degradability:

**12.3.1 Persistence:** Not relevant for metals

**12.3.2 Biological degradability:** Not degradable

**12.4 Bioaccumulative potential:** Not bio accumulative

**12.5 Long term ecotoxicity:** Not classified for ecotoxicity

**12.6 Results of PBT assessment:** Not relevant for metals

**12.7 Other adverse effects:** No

**12.8 Final assessment:** No acute or chronic classification is appropriate for Al metal massive based on non toxic results below the Ecotoxicity Reference Value (ERV) of tests with aluminium metal, oxide and hydroxide at loadings of 100 mg/L at pH 8-8.5 (maximum solubility of Al expected).

All aluminium in soil or the aquatic environment comes from natural sources. Local sources has an insignificant contribution and impact on environment

## 13. Disposal considerations

### 13.1 Disposal / Waste (Product):

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Dispose of wastes and residues in accordance with local waste regulations.

### 13.2 Packaging:

Not relevant

### 14. Transport information

Not regulated

### 15. Regulatory Information

No classification or special regulations. Follow general rules for handling, transport and waste management. Chemical Safety Assessment carried out.

### 16. Other information

In dealing with chemicals the national laws and regulation must be observed and applied.

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.

Recommended limitations of use by manufacturer:

For industrial use and as component in consumer products.

Version history:

Original: 14.02.12

Revision: -01

Doc.-ID:

### Department issuing MSDS:

Health/Safety: xxx

### Abbreviations and acronyms:

ACGIH	American Conference of Governmental Industrial Hygienists
OSHA	Occupational Safety and Health Administration (US)
ADR:	Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID:	Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations concerning the International Transport of Dangerous Goods by Rail)
IMDG:	International Maritime Code for Dangerous Goods
IATA:	International Air Transport Association
IATA-DGR:	Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO:	International Civil Aviation Organization
ICAO-TI:	Technical Instructions by the "International Civil Aviation Organization" (ICAO)
GHS:	Globally Harmonized System of Classification and Labelling of Chemicals
EINECS:	European Inventory of Existing Commercial Chemical Substances
CAS:	Chemical Abstracts Service (division of the American Chemical Society)
Bwt	bodyweight
PNEC	Potential No Effect Concentration
DNEL	Derived No Effect Level
DOC	Dissolved Organic Compounds