



Nota :

This document is provided for prevention information purposes only.

The product mentioned above does not strictly meet the criteria listed in the current legislation (REACH - 1907/2006/EC) because the producer is not legally required to provide a safety data sheet for non classified products

1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

1.1 –Product identifier

Name of the substance:	ALUMINIUM OXIDE, ALUMINA
Chemical name & formula:	Aluminium oxide - Al ₂ O ₃
REACH registration number:	01-2119529248-35-0009 (<i>alumina powder registration number</i>)

1.2 Use(s)

- Technical ceramics manufacturing
- Synthetic gemstones manufacturing
- Various uses as functional additive or specialty abrasive

1.3 Manufacturer / supplier

1.3.1 – Name of manufacturer / supplier :

BAIKOWSKI[®]

Company address : 1046 route de Chaumontet
74330 POISY
France

Phone : +33 (0)4 50 22 69 02

Fax : +33 (0)4 50 22 28 92

1.3.2 – E-mail

qhse@baikowski.com

1.3.3 – Emergency information

National emergency call nr, France ORFILA : +33 (0)1 45 42 59 59



2. HAZARDS IDENTIFICATION

2.1 – Classification

Not classified according to 1272/2008 (CLP).

2.2 – Informations concerning particular hazards for human & environment

Does not cause any health hazard under normal conditions of use and as delivered.

High dust concentration in working environment may cause irritation of eyes, skin and respiratory tract.

In its crystalline form, the product can have sharp edges that may cause cuts to the hands during handling (cf section 8).

3. COMPOSITION / INFORMATIONS ON INGREDIENTS

3.1 – Chemical characterization

Aluminium oxide content : > 98 wt%.

3.2 – Ingredients

Component	EC #	CAS #	Concentration	Classification	H- Phrases
Aluminium oxide	215-691-6	1344-28-1 (<i>alumina powder</i>)	> 98 %	<i>none</i>	<i>none</i>

3.3 – Additional informations

Usual packaging : usually supplied to customers in bulk or big bags.

4. FIRST-AID MEASURES

4.1 – General information

First aid personnel : paid attention to self-protection.

- Inhalation :
 - Removed to ventilated area
 - Keep calm
 - In case of ongoing discomfort consult a doctor
- Skin contact:
 - In case of large exposure wash with soap and water.
 - In case of cut, disinfect



- Eye contact:
 - Flush thoroughly and immediately with water, keeping eyes wide open for 15 minutes.
 - In case of persistent irritation or injury by shrapnels, consult a doctor
- Ingestion:
 - Wash mouth with water

4.2 – Note to physician

None

5. FIRE-FIGHTING MEASURES

Not flammable

5.1 – Suitable extinguishing agents

Use appropriate extinguishing agents 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 equipment for the surrounding fired material.

5.5 – Additional hints

None

6. ACCIDENTAL RELEASE MEASURES

6.1 – Personal safety precautions

See the protective 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

Cf 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.

7.2 – Storage

- Requirements to be met by storerooms and receptacles: store in dry area.

Additional hints:

In the crystalline form, as sapphire is a brittle material, it is recommended to avoid shock & sudden temperature changes.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 – Exposure limits

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

	Total dust	Inhalable dust	Respirable dust
France	VME : 10 mg/m ³		
Germany		10 mg/m ³	3 mg/m ³
Great-Britain		10 mg/m ³	4 mg/m ³
USA	OHSA : 15 mg/m ³		TWA : 5 mg/m ³

8.2 – Exposure control

- 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 P3 (fine particles)
- Eye protection:
 - Use protective goggles while handling material.
- Skin protection de la peau :
 - Use protective gloves while handling material & wear appropriate work clothes.

8.4 – Environmental exposure control

- Avoid creating dusty conditions
- Prevent wind dispersal and dust emissions.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 – General information

- Physical state : solid powder or beads or crystalline solid
- Colour : white to translucent white
- 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 : 3,2 à 4,0 g/cm³
- Solubility in water (20°C) : Insoluble
- Other physical-chemical properties : Crystalline solid hardness: Mohs 9

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

Alumine powder :

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)	> 5000 mg/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 effect on skin	None
Irritant effect on eyes	No effects apart from mechanical irritation

11.3 – Sensitisation

After skin contact	None
After inhalation	None

Remarques : none



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, cf. occupational exposure limits. Calculated DNEL: 15,6 mg/m ³ respirable.

11.5 – CMR effects (carcinogenic, mutagenic and reproductive effects)

Carcinogenicity	None
Mutagenicity	None
Reproductive toxicity	None

Assessment of CMR Properties : Not classified for CMR.

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

11.6 – Pratical expérience

- Observations relevant for classification : None.
- Other observations: None

12. ECOLOGICAL INFORMATIONS

12.1 – – Ecotoxicity

Component	Test	Résult	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

– Mobility

- Not mobile under normal environmental conditions
- May be leached from the ground at low pH (<5,5) or high pH (> 8,5).

12.2 – Persistence and degradability:

12.2.1 – Persistence

Not relevant for metals.



12.2.2 – Biological degradability
Not dégradable

12.3 – Bio accumulative potential

Not bio accumulative.

12.4 – Long term ecotoxicity

Not classified for ecotoxicity.

12.5 – Results of PBT assessment

Not relevant for metals.

12.6 – Other adverse effects

None.

12.7 –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)

- Dispose of wastes and residues in accordance with local waste regulations.
- Wastes are not classified as hazardous according decree No. 2002-540 du 18 avril 2002 regarding hazardous wastes classification.

13.2 – Packaging

Not relevant.

14. TRANSPORT INFORMATION

	Road (ADR)	Train (RID)	Ship (IMDG)	Airplane (ICAO/IATA)
ONU number	NOT APPLICABLE. The substance is not a dangerous goods			
Class				
Shipment designation				
Packing group				
Marine pollutant				
Other relevant information				



15. REGULATORY INFORMATION

No classification or special regulations. Follow general rules for handling, transport and waste management.

Chemical Safety Assessment carried out.

The substance is not classified as dangerous, there is no exposure scenario.

WGK Class : Substance listed in annex I to the VwVwS: WGK nwg: Non-water polluting substance

16. OTHER INFORMATION

The modifications are pointed out by the symbol (▲).

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.

Abbreviations and acronyms:

ACGIH	American Conference of Governmental Industrial Hygienist
CAS	Chemical Abstracts Service
CIRC	Centre International de Recherche sur le Cancer
LC50	Lethal Concentration, 50%
LD50	Lethal Dose, 50%
DNEL	Derived No Effect Level (niveau dérivé sans effet)
EINECS	Européan Inventory of Existing Commercial Chemical Substances
NTP	National Toxicology Program
OHSA	Occupational Safety and Health Administration (USA)
PBT	Persistante, Bioaccumulable et Toxique
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals (Enregistrement, évaluation, autorisation et restriction des produits chimiques)
TWA	Time Weighted Average (VME aux USA)
VME	Valeur Moyenne d'Exposition
WGK	German Water Hazard Class