

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product name

ALFA TAB®

Name: aluminium oxide (CAS: 1344-28-1, EC: 215-691-6)**REACH Registration number:** 01-2119529248-35-0068<https://my.chemius.net/p/7JL3RL/en/pd/en>

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses

Industrial use. Raw material in the refractories, ceramics, glass and chemical industries, abrasives, polishing aids; use as an additive, filler, pigment

Uses advised against

Not known.

1.3 Details of the supplier of the safety data sheet

SupplierSILKEM, d. o. o.
Tovarniška cesta 10
2325 Kidričevo, Slovenia
+386 2 7991 200
info@silkem.si

1.4 Emergency Telephone Number

Emergency

111

Supplier

+386 2 7991 208 (7h - 15h)

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

According to the regulation, the chemical is not classified as hazardous.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)**Hazard statements:**

Not applicable.

Supplemental hazard information (EU):

EUH210 Safety data sheet available on request.

Precautionary statements:

Not applicable.

Special provisions

The product is not classified as dangerous according to regulations.

2.3 Other hazards

PBT/vPvB

No information.

Endocrine disrupting properties

The product does not contain substances with the potential for endocrine disorders.

Additional information

The substances in the product are not classified as persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB).

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Name	CAS EC Index Reach	%	Classification according to Regulation (EC) No 1272/2008 (CLP)	Specific Concentration Limits	Notes for substances
aluminium oxide	1344-28-1 215-691-6 - 01-2119529248-35-0068	99,5	/	/	/

3.2 Mixtures

For substances see 3.1.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General notes

Person giving first aid should properly protect himself.

Following inhalation

Remove patient to fresh air - move out of dangerous area. If symptoms develop and persist, seek medical attention.

Following skin contact

Take off all contaminated clothing. Wash affected skin areas immediately with plenty of water and soap. If symptoms develop and persist, seek medical attention.

Following eye contact

Immediately flush eyes with running water, keeping eyelids apart. If irritation persists, seek professional medical attention.

Following ingestion

Rinse mouth thoroughly with water. In case of doubt or if feeling unwell seek medical help. Show the physician the safety data sheet or label.

4.2 Most important symptoms and effects, both acute and delayed

Following inhalation

No symptoms are expected.

Following skin contact

No irritant effects.

Following eye contact

No symptoms are expected. Dust irritates the eyes (by mechanical means).

Following ingestion

No symptoms are expected.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

The product is not combustible. Use the usual extinguishing measures (carbon dioxide (CO₂), dry chemical, foam; water spray) Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

Full water jet.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products

The product itself does not burn.

5.3 Advice for firefighters

Protective actions

In case of fire or heating do not breathe fumes/vapours.

Special protective equipment for fire-fighters

Select according to conditions and other factors.

Additional information

No information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel**Protective equipment**

Use personal protective equipment (Section 8).

Precautionary measures

Ensure adequate ventilation.

Emergency procedures

Prevent formation of dust.

For emergency responders

Use personal protective equipment.

6.2 Environmental precautions

Prevent contamination of soil and ground water.

6.3 Methods and material for containment and cleaning up

For containment

No information.

For cleaning up

Sweep up the dust or even use suitable vacuum cleaner (if possible). Collect the product and recycle it for reuse.

Other information

No information.

6.4 Reference to other sections

See also sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling**Protective measures****Measures to prevent fire**

Ensure adequate ventilation.

Measures to prevent aerosol and dust generation

Prevent dust formation.

Measures to protect the environment

Avoid release to the environment.

Other measures

No information.

Advice on general occupational hygiene

Use good personal hygiene practices – wash hands at breaks and when done working with material. Do not eat, drink or smoke while working. Do not breathe dust.

7.2 Conditions for safe storage, including any incompatibilities**Technical measures and storage conditions**

Keep in a cool, dry and well ventilated place.

Packaging materials

No information.

Requirements for storage rooms and vessels

Close opened containers after use. Put the containers upright to prevent from leaking.

Storage temperature

No information.

Storage class

No information.

Further information on storage conditions

No information.

7.3 Specific end use(s)**Recommendations**

No information.

Industrial sector specific solutions

No information.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure limit values

Name	mg/m ³	ml/m ³	Short-term value mg/m ³	Short-term value ml/m ³	Remark	Biological Tolerance Values
aluminium oxide	15	/	/	/	OSHA/TWA, total dust	/
aluminium oxide	5	/	/	/	OSHA/TWA, respiratoric dust	/
Aluminium oxides inhalable dust (1344-28-1)	10	/	/	/	/	/
Aluminium oxides respirable dust (1344-28-1)	4	/	/	/	/	/

Information on monitoring procedures

BS EN 14042:2003 Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents. BS EN 689:2018 Workplace exposure. Measurement of exposure by inhalation to chemical agents. Strategy for testing compliance with occupational exposure limit values. BS EN 482:2021 Workplace exposure. Procedures for the determination of the concentration of chemical agents. Basic performance requirements.

DNEL/DMEL values

For product

No information.

For components

Name	Type	Exposure route	exp. frequency	Remark	Value
aluminium oxide	Worker	inhalation	long term systemic effects	/	15.63 mg/m ³
aluminium oxide	Worker	inhalation	long term local effects	/	15.63 mg/m ³
aluminium oxide	Consumer	oral	long term systemic effects	/	6.58 mg/kg bw/day

PNEC values

For product

No information.

For components

Name	Exposure route	Remark	Value
aluminium oxide	fresh water	/	74.9 µg/l
aluminium oxide	water treatment plant	/	20 mg/L

8.2 Exposure controls

Appropriate engineering control

Substance/mixture related measures to prevent exposure during identified uses

Use good personal hygiene practices – wash hands at breaks and when done working with material.

Structural measures to prevent exposure

No information.

Organisational measures to prevent exposure

Remove all contaminated clothes immediately and wash them before reuse.

Technical measures to prevent exposure

Provide good ventilation and local exhaust in areas with increased concentration.

Personal protective equipment

Eye and face protection

Safety glasses with side protection (BS EN ISO 16321-1:2022).

Hand protection

Protective gloves (EN 374).

Appropriate materials

No information

Skin protection

Cotton protective clothing and shoes that cover the entire foot (EN ISO 20345).

Respiratory protection

Not needed under normal use and adequate ventilation. In case of insufficient ventilation wear suitable respiratory protection. Mask with dust filter (P2) or FFP2 (EN 149). Wear a mask with a filter for dust/aerosols - FFP3 (EN 149). 'High/elevated concentrations' means that the occupational exposure limit values have been exceeded.

Thermal hazards

No information.

Environmental exposure controls

Substance/mixture related measures to prevent exposure

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

Instruction measures to prevent exposure

No information.

Organisational measures to prevent exposure

No information.

Technical measures to prevent exposure

No information.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Important health, safety and environmental information

Physical state	solid
Shape	No information.
Colour	white
Odour	Odorless
Odour threshold	No information.
Melting/freezing point	> 2000 °C

Boiling point or initial boiling point and boiling range	> 2980 °C
Flammability	Not flammable.
Lower and upper explosion limit	No information.
Flash point	No information.
Auto-ignition temperature	No information.
Decomposition temperature	No information.
pH	
Viscosity	No information.
Solubility (Water)	Insoluble
Partition coefficient n-octanol/water (log value)	No information.
Vapour pressure	No information.
Relative density	ca. 3.55 g/cm ³
Relative vapour/gas density	No information.
Particle characteristics	No information.

9.2 Other information

Information with regard to physical hazard classes

Explosive properties	Product is not explosive.
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Other safety characteristics

No information.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

Stable under normal conditions.

10.2 Chemical stability

Product is stable under normal conditions of use, recommended handling and storage conditions.

10.3 Possibility of hazardous reactions

There are no known hazardous reactions.

10.4 Conditions to avoid

No special precautions required. Consider the directions for use and storage.

10.5 Incompatible materials

Not known.

10.6 Hazardous decomposition products

Under normal use conditions no hazardous decomposition products are expected.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

(a) Acute toxicity**For components**

Name	Exposure route	Type	Species	Time	Value	Method	Remark
aluminium oxide	oral	LD ₅₀	rat	/	> 2000 mg/kg	/	/
aluminium oxide	inhalation	LC ₅₀	rat	/	> 2.3 mg/l	/	/

(b) Skin corrosion/irritation**For components**

Name	Species	Time	result	Method	Remark
aluminium oxide	rabbit	/	Non-irritant.	/	/

(c) Serious eye damage/irritation**For components**

Name	Exposure route	Species	Time	result	Method	Remark
aluminium oxide	/	rabbit	/	Non-irritant.	/	/

(d) Respiratory or skin sensitisation

No information.

(e) (Germ cell) mutagenicity**For components**

Name	Type	Species	Time	result	Method	Remark
aluminium oxide	in-vitro mutagenicity	/	/	Negative.	/	/

(f) Carcinogenicity

No information.

(g) Reproductive toxicity**For components**

Name	Reproductive toxicity type	Type	Species	Time	Value	result	Method	Remark
aluminium oxide	Effects on fertility	-	/	/	/	No effect	/	/
aluminium oxide	Developmental toxicity	-	/	/	/	No effect	/	/

Summary of evaluation of the CMR properties

No information.

(h) STOT-single exposure**For components**

Name	Exposure route	Type	Species	Time	Exposure	organ	Value	result	Method	Remark
aluminium oxide	oral	NOAEL	rat	1 years	/	/	≥ 30 mg/kg bw	No effect.	/	/

(i) STOT-repeated exposure**For components**

Name	Exposure route	Type	Species	Time	Exposure	organ	Value	result	Method	Remark
aluminium oxide	inhalation	TCLo	rat	28 weeks	/	Lungs, Thorax, or Respiration	200 mg/m ³	Structural or functional change in trachea or bronchi	/	28 week(s)-Intermittent, 5h
aluminium oxide	inhalation	TCLo	rat	28 weeks	/	Lungs, Thorax, or Respiration	200 mg/m ³	Chronic pulmonary edema	/	28 week(s)-Intermittent, 5h

(j) Aspiration hazard

No information.

Symptoms related to the physical, chemical and toxicological characteristics

No information.

Interactive effects

No information.

11.2 Information on other hazards**Endocrine disrupting properties**

The product does not contain substances with the potential for endocrine disorders.

Other information

No information.

SECTION 12: ECOLOGICAL INFORMATION**12.1 Toxicity****Acute (short-term) toxicity****For components**

Name	Type	Value	Exposure time	Species	organism	Method	Remark
aluminium oxide	EC ₅₀	100 mg/L	0	fish	<i>Salmo trutta</i>	/	/

Name	Type	Value	Exposure time	Species	organism	Method	Remark
aluminium oxide	EC ₅₀	100 mg/L	48 h	crustacea	<i>Daphnia magna</i>	/	/
aluminium oxide	EC ₅₀	100 mg/L	72 h	algae	<i>Selenastrum capricornutum</i>	/	/

Chronic (long-term) toxicity

No information.

12.2 Persistence and degradability**Abiotic degradation, physical- and photo-chemical elimination**

No information.

Biodegradation**For components**

Name	Type	Rate	Time	Evaluation	Method	Remark
aluminium oxide	biodegradability	/	/	Slowly degradable.	/	/

12.3 Bioaccumulative potential**Partition coefficient n-octanol/water (log value)**

No information.

Bioconcentration factor (BCF)

No information.

12.4 Mobility in soil**Known or predicted distribution to environmental compartments**

No information.

Surface tension

No information.

Adsorption/Desorption

No information.

12.5 Results of PBT and vPvB assessment

The components in this product do not meet the criteria for classification as PBT or vPvB.

12.6 Endocrine disrupting properties

The product does not contain substances with the potential for endocrine disorders.

12.7 Other adverse effects

No information.

12.8 Additional information**For product**

Product is not classified as hazardous for environment.

For components

aluminium oxide

No bioaccumulation expected. This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product / Packaging disposal**Waste chemical**

Disposal must be made according to official regulations: deliver it to authorised collector/remover/transformer of hazardous waste.

Waste codes / waste designations according to LoW

06 13 99 - wastes not otherwise specified

Packaging

Deliver completely emptied containers to approved waste disposal authorities.

Waste codes / waste designations according to LoW

No information.

Waste treatment-relevant information

No information.

Sewage disposal-relevant information

No information.

Other disposal recommendations

No information.

SECTION 14: TRANSPORT INFORMATION

14.1 UN number or ID number

ADR/RID	IMDG	IATA	ADN
Not dangerous according to transport regulations.	Not dangerous according to transport regulations.	Not dangerous according to transport regulations.	Not dangerous according to transport regulations.

14.2 UN proper shipping name

ADR/RID	IMDG	IATA	ADN
Not given/not applicable	Not given/not applicable	Not given/not applicable	Not given/not applicable

14.3 Transport hazard class(es)

ADR/RID	IMDG	IATA	ADN
Not given/not applicable	Not given/not applicable	Not given/not applicable	Not given/not applicable

14.4 Packing group

ADR/RID	IMDG	IATA	ADN
Not given/not applicable	Not given/not applicable	Not given/not applicable	Not given/not applicable

14.5 Environmental hazards

ADR/RID	IMDG	IATA	ADN
NO	NO	NO	NO

14.6 Special precautions for user

ADR/RID	IMDG	IATA	ADN
Limited quantities: Not given/not applicable	Limited quantities: Not given/not applicable		Limited quantities: Not given/not applicable

14.7 Maritime transport in bulk according to IMO instruments

ADR/RID	IMDG	IATA	ADN
	Not given/not applicable		

SECTION 15: REGULATORY INFORMATION

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

- Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (including last amendment Commission Regulation (EU) 2020/878)

- Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures

Information according 2004/42/EC about limitation of emissions of volatile organic compounds (VOC-guideline)

not applicable

Ingredients according to Regulation (EC) No 648/2004 on detergents

No information.

Special instructions

No information.

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

SECTION 16: OTHER INFORMATION

Indication of changes

2.2 Label elements 12.8 Additional information 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Key literature references and sources for data

No information.

Abbreviations and acronyms

ATE - Acute Toxicity Estimate

ADR - Agreement concerning the International Carriage of Dangerous Goods by Road

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

CEN - European Committee for Standardisation

C&L - Classification and Labelling

CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008

CAS# - Chemical Abstracts Service number
CMR - Carcinogen, Mutagen, or Reproductive Toxicant
CSA - Chemical Safety Assessment
CSR - Chemical Safety Report
DMEL - Derived Minimal Effect Level
DNEL - Derived No Effect Level
DPD - Dangerous Preparations Directive 1999/45/EC
DSD - Dangerous Substances Directive 67/548/EEC
DU - Downstream User
EC - European Community
ECHA - European Chemicals Agency
EC-Number - EINECS and ELINCS Number (see also EINECS and ELINCS)
EEA - European Economic Area (EU + Iceland, Liechtenstein and Norway)
EEC - European Economic Community
EINECS - European Inventory of Existing Commercial Substances
ELINCS - European List of notified Chemical Substances
EN - European Standard
EQS - Environmental Quality Standard
EU - European Union
Euphrac - European Phrase Catalogue
EWC - European Waste Catalogue (replaced by LoW – see below)
GES - Generic Exposure Scenario
GHS - Globally Harmonized System
IATA - International Air Transport Association
ICAO-TI - Technical Instructions for the Safe Transport of Dangerous Goods by Air
IMDG - International Maritime Dangerous Goods
IMSBC - International Maritime Solid Bulk Cargoes
IT - Information Technology
IUCLID - International Uniform Chemical Information Database
IUPAC - International Union for Pure Applied Chemistry
JRC - Joint Research Centre
Kow - octanol-water partition coefficient
LC50 - Lethal Concentration to 50 % of a test population
LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose)
LE - Legal Entity
LoW - List of Wastes (see <http://ec.europa.eu/environment/waste/framework/list.htm>)
LR - Lead Registrant
M/I - Manufacturer / Importer
MS - Member States
MSDS - Material Safety Data Sheet
OC - Operational Conditions
OECD - Organization for Economic Co-operation and Development
OEL - Occupational Exposure Limit
OJ - Official Journal
OR - Only Representative
OSHA - European Agency for Safety and Health at work
PBT - Persistent, Bioaccumulative and Toxic substance
PEC - Predicted Effect Concentration
PNEC(s) - Predicted No Effect Concentration(s)
PPE - Personal Protection Equipment
(Q)SAR - Qualitative Structure Activity Relationship
REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID - Regulations concerning the International Carriage of Dangerous Goods by Rail
RIP - REACH Implementation Project
RMM - Risk Management Measure
SCBA - Self-Contained Breathing Apparatus
SDS - Safety data sheet
SIEF - Substance Information Exchange Forum
SME - Small and Medium sized Enterprises
STOT - Specific Target Organ Toxicity
(STOT) RE - Repeated Exposure
(STOT) SE - Single Exposure

SVHC - Substances of Very High Concern

UN - United Nations

vPvB - Very Persistent and Very Bioaccumulative

List of relevant H phrases

No information.