

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

### 1.1 Product identifier

**Product name**

SALOX®

**Name:** aluminium oxide (CAS: 1344-28-1, EC: 215-691-6)**REACH Registration number:** 01-2119529248-35-0068**Synonyms**

The product names refer to additional codes representing different material grades of  
Calcined alumina

**Product code**

[100 (GKM), S100 (GKM), MS 100, LS100, S15 (GKT), MS15 (GKT-MS), LS15 (GKT-LS), VLS15 (GKT-VLS), S15SG (GKT-SG), LS15SG (GKT-LS-SG), VLS15SG (GKT-VLS-SG), M-1 (GKE), M-S1 (GKE-V), M-MS1, M-LS1, M-VLS1, M-1FG (GKE-MF), MS1FG (GKE-V-MF), M-MS1FG, M-LS1FG, M-VLS1FG, M-1SG, M-S1SG, M-MS1SG, M-LS1SG, M-VLS1SG, LS6, VLS6, MS15SG, M-VLS1SG3, S1R, M-MS1-200, M-MS1-100, M-S1RS1, M-VLS1R, M-MS1BM, S-100FG10, S-100FG5, S-100FG3]



<https://my.chemius.net/p/YKswBg/en/pd/en>

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

**Relevant identified uses**

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

**Manufacturer**

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

### 1.4 Emergency Telephone Number

**Emergency**

111

**Manufacturer**

+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	99.3-99.7	/	/	/

**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.

**Following ingestion**

No symptoms are expected.

## 4.3 Indication of any immediate medical attention and special treatment needed

No information.

**SECTION 5: FIREFIGHTING MEASURES**

## 5.1 Extinguishing media

**Suitable extinguishing media**

The product is not combustible. Use the usual extinguishing measures (carbon dioxide (CO<sub>2</sub>), 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**

No information.

## 5.3 Advice for firefighters

**Protective actions**

No information.

**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**

No information.

**For emergency responders**

No information.

**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**

No information.

**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**

No information.

**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 <sup>3</sup>	ml/m <sup>3</sup>	Short-term value mg/m <sup>3</sup>	Short-term value ml/m <sup>3</sup>	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 <sup>3</sup>
aluminium oxide	Worker	inhalation	long term local effects	/	15.63 mg/m <sup>3</sup>
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**

No information.

**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**

No information.

**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	no odour
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	No information.
Viscosity	No information.
Solubility (Water)	Insoluble
Partition coefficient n-octanol/water (log value)	No information.
Vapour pressure	No information.
Bulk density	800 — 1100 kg/m <sup>3</sup>
Relative vapour/gas density	No information.
Particle characteristics	No information.

#### 9.2 Other information

##### Information with regard to physical hazard classes

No information.

##### 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 <sub>50</sub>	rat	/	> 2000 mg/kg	/	/
aluminium oxide	inhalation	LC <sub>50</sub>	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 <sup>3</sup>	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 <sup>3</sup>	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 <sub>50</sub>	100 mg/L	0	fish	<i>Salmo trutta</i>	/	/
aluminium oxide	EC <sub>50</sub>	100 mg/L	48 h	crustacea	<i>Daphnia magna</i>	/	/
aluminium oxide	EC <sub>50</sub>	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

No information.

##### 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: <b>Not given/not applicable</b>	Limited quantities: <b>Not given/not applicable</b>		Limited quantities: <b>Not given/not applicable</b>

## 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**

3.1 Substances 4.1 Description of first aid measures 7.2 Conditions for safe storage, including any incompatibilities 8.1 Control parameters 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008 12.1 Toxicity 12.2 Persistence and degradability 12.8 Additional information

### Key literature references and sources for data

Safety Data Sheet of GK, Version 1.0

### 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.