LB MINERALS, s.r.o.

Material Safety Data Sheet in compliance with Regulation (EC) 1907/2006 and Regulation (EC) 1272/2008
Version **09.0**
Revision date **September 2023**

SECTION 1: Identification of the substance/mixture and the company/undertaking

1.1 Product identifier

Kaolinitic clay

REACH Registration number: Exempted in accordance with Annex V.7 of Regulation (EC) 1907/2006

Trade names: **AGB, AGB ex, AGB/B, AGB/KR1, AGB/L, AGL, AGW/A, A*,**
B1, B10, B14, B2, B20, B21, B2W, B3, B4, BCH, BF, BN, BS, BSF, B*,
GEC, GEM, GEP, GMR, HC, HC/R, HCN, CH, IB, IBN, IBN/Z, IBV,
JHD, K, KAC, KOP, KYB, KYŠ, LEČ, LIS, MM, MM-B, MM-R, MP, M*, NF, NO,
PLUTO, PLUTO/K, R, SAN*, SE1, ULK, VIZ, WEI, WES, WIR, WIS/R, ŽIČ, sealing soil
(note - Indicates any additional text specifying the individual product characteristics)*

CAS number: none - (999999-99 - Naturally occurring substances)
EC number: none – (310-1127-6 - Naturally occurring substances)

Other identification means: Kaolinite clays, refractory binding clays, refractory earthen clays, sealing clays, foundry clays, earthenware clays, bleached earthen clays, mixed clays, and tile mass

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

Kaolinitic clay has a variety of uses and is used notably in the manufacture of:
- Ceramics (tiles, sintered tiles, China, electrical porcelain, sanity ceramics, utility ceramics, chemical and building ceramics e.t.c.)
- Refractory material (tank block, chamotes, graphite crucibles, stack inserts e.t.c.)
- Packing material in the case of founding or closing the waste dump, or reconstruction of pond and recultivation of landscape
- Stove goods
- Colour and plastic addition for ceramic mass with low temperature of calcination,
- Mixing and combination with compoundable substances or minerals

1.2.1 Relevant identified uses

Industrial, professional, and private use

1.2.2 Uses advised against

No use identified in Section 1.2 is advised against.

1.3 Details of the supplier of the material safety data sheet

Name:	LB MINERALS, s.r.o. www.lb-minerals.cz
Address:	Tovární 431, CZ 330 12 Horní Bříza
Phone N°:	+420 378 071 111
Identification number (CRN)/VAT Reg No:	27994929/CZ27994929
E-mail of competent person responsible for SDS in the MS or in the EU:	msds@lb-minerals.cz

1.4 Emergency telephone number

European Emergency N°:	112	
Emergency telephone number	National Health Service (NHS) 111	
Available outside office hours:	☒ Yes	❑ No

SECTION 2: Hazards Identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008:
Not classified as hazardous
See section 16 for the full text of the classifications and hazard statements.

2.2 Label elements

None

2.3 Other hazards

The substance does not meet the criteria for PBT or vPvB substance in accordance with Annex XIII of regulation (EC) No 1907/2006 (REACH). The substance is not considered to be an endocrine disruptor for human health or the environment in accordance with Annex I of Regulation (EC) No. 1272/2008 (CLP).
Depending on the application and processing, airborne dust containing RCS may be formed.

SECTION 3: Composition/information on ingredients

3.1 Substances

Kaolinitic clay is a UVCB substance sub-type 4. The purity of the product is 100 % w/w.
This product contains less than 1% w/w of respirable silica (RCS) which is self-classified as STOT RE1.

SECTION 4: First aid measures

4.1 Description of first aid measures

Pay attention to your own safety. No special personal protective equipment is recommended for first aid personnel.

Following inhalation
It is recommended to move the affected persons from the area to fresh air. If the problem persists, seek a medical advice.

Following skin contact
Wash the skin with water and soap and use protective ointment.

Following eye contact
Rinse with a large amount of water and seek medical attention if irritation persists.

Following ingestion
Rinse mouth with a large amount of water. Do not induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

The acute symptoms would give pain in the eyes because of dust entry. No delayed effects are anticipated if first aid treatment is applied and is effective.

4.3 Indication of any immediate medical attention and special treatment needed

No need for immediate medical attention; follow the advises given in section 4.1

SECTION 5: Firefighting measures

5.1 Extinguishing media

Adapt the fire extinguishing agent to the fire surroundings.

5.2 Special hazards arising from the substance or mixture

None. The material is not flammable, and it does not lead to hazardous thermal decomposition products.

5.3 Advice for fire-fighters

Avoid generation of dust. Use breathing apparatus.
Product on floor when wetted will become slippery and may present a hazard; wear anti-slip boots.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment, and emergency procedures

Avoid the formation of airborne dust, wear personal protective equipment in accordance with local legislation, and see EN 143.

6.2 Environmental precautions

Prevent any leaked material spreading. Remove leaked material with suction systems.

6.3 Methods and material for containment and cleaning up

Avoid dust formation; avoid dry sweeping. Use water spray cleaning systems or extractors to prevent airborne dust formation. Wear personal protective equipment in accordance with the local regulations.

6.4 Reference to other sections

For more information on exposure controls/personal protection or disposal considerations, please refer to sections 8 and 13 of this safety data sheet.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

7.1.1 Recommendations

Keep dust levels to a minimum. Minimize dust generation.
Provide appropriate exhaust ventilation at places where airborne dust is generated. In case of insufficient ventilation, wear suitable respiratory protective equipment refer to section 8 of this safety data sheet. Handle packaged products carefully to prevent accidental bursting. If you require advice on safe handling techniques, please contact your supplier or check the Good Practice Guide referred to in section 16.

7.1.2 Advice on general occupational hygiene

No drink eat and smoke at the workplace. Wash your hands and change contaminated clothing before entering dining room.

7.2 Conditions for safe storage, including any incompatibilities

Minimise airborne dust generation and prevent wind dispersal during loading and unloading. Keep containers closed and store packaged products to prevent accidental bursting. Store in a dry covered area it may be stored for unlimited periods.
Pallets cannot be stacked.

7.3 Specific end use(s)

If you require advice on specific uses, please contact your supplier.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Follow workplace regulatory exposure limits for all types of airborne dust (e. g. total dust, respirable dust, respirable crystalline silica dust).

The occupational exposure limit values (OEL) in the Czech Republic are set by Government Decree No. 361/2007 Coll. on the requirements for health protection at work (measured as an 8-hour time-weighted average):

Name of substance /component	Type	Value ($mg*m^{-3}$)
other quartzes (with the exception of asbestos)	**OEL_r */OEL_t** * *SiO_2 contents in respirable fraction ≤ 5% (valid in the CZ)*	2 / 10
	OEL_r **/ OEL_t ** *SiO_2 contents in respirable fractions > 5% (valid in the CZ)*	10 : F_r / 10

F_r – fibrogenetic component contents in respirable fractions %

The permissible exposure limit of the respirable fraction can be specified by the national legislation of the EU Member State.

8.2 Exposure controls

8.2.1 Appropriate engineering controls

Minimize airborne dust generation. Use process enclosures, local exhaust ventilation or other engineering controls to keep airborne levels below specified exposure limits. Avoid dry sweeping.

8.2.2 Individual protection measures, such as personal protective equipment

Eye/face protection
Do not wear contact lenses. For powders, tight fitting goggles with side shields, or wide vision full goggles. It is also advisable to have individual pocket eyewash.

Skin/hands protection
For skin, normal work clothes are appropriate. After finishing work, wash the skin with soap and water, or use a greasy cream - the products may dry the skin.

Respiratory protection
In case of prolonged exposure to airborne dust concentrations, wear respiratory protective equipment with the requirements of national legislation is recommended.

Thermal hazards
None.

8.2.3 Environment exposure controls

Avoid releasing to the environment. Avoid dust swirling.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	solid
Colour	white, beige, ochre, light grey, greenish (colour and shade is given by the individual material types, they also depend on their grain size and moisture)
Odour	odourless
Melting point/freezing point	> 450 °C (study result, EU A.1 method)
Boiling point or initial boiling point and boiling range	does not apply to solids
Flammability	non-flammable (study result, EU A.10 method)
Lower and upper explosion limit	does not apply to solids
Flash point	does not apply to solids
Auto-ignition temperature	does not apply to solids
Decomposition temperature	does not apply to solids
pH (20°C) suspension – 1 part dry matter : 7 parts water	3-8
Kinematic viscosity	does not apply to solids
Solubility	< 1 mg/L at 20°C (study results, EU A.6 method)
Partition coefficient: n-octanol/water (log value)	does not apply to solids
Vapour pressure	does not apply to solids
Density and/or relative density	2.6 g/cm³
Relative vapour density	does not apply to solids
Particle characteristics	bulk particles, lumps, pellets, granules or powder, micro-milled powder, does not contain a nanoform as defined in Annex VI of Regulation REACH

9.2 Other information

Bulk density:	0.5 – 0.9 g/cm³ for fine materials 1.0 - 1.3 g/cm³ for bulk materials and granules

SECTION 10: Stability and reactivity

10.1	**Reactivity**	Inert, not reactive
10.2	**Chemical stability**	Kaolinitic clay is chemically stable
10.3	**Possibility of hazardous reactions**	Products may react violently with hydrofluoric acid and its products.
10.4	**Conditions to avoid**	None
10.5	**Incompatible materials**	Hydrofluoric acid products
10.6	**Hazardous decomposition products**	None

SECTION 11: Toxicological information

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

Hazard classes	**Outcome of the effect assessments: IMA document from February 2020**
Acute toxicity Oral Dermal Inhalation	LD_{50} > 5000 mg/kg body weight/day (OECD 401, rat) Based on the available data, the classification criteria are not met. Based on the available data, the classification criteria are not met.
Skin corrosion / irritation	Kaolinitic clay is not irritating to skin (OECD 404, rabbit).
Serious eye damage / irritation	Kaolinitic clay is not irritating to eye (OECD 405, rabbit). Kaolinitic clay is regarded as a mild irritant to eyes (according to the modified Kay & Calandra criteria).
Respiratory or skin sensitisation	Based on the available data, the classification criteria are not met.
Germ cell mutagenicity	Based on the available data, the classification criteria are not met.
Carcinogenicity	In studies where kaolinitic clay has been administered via intratracheal installation, kaolinitic clay behaves as a poorly soluble particulate of low toxicity with inflammatory responses of lung tissue. Epidemiological studies covering a large number of workers did not reveal an explicit association between kaolinitic clay exposure and tumour formation. In summary, no concern on carcinogenicity is triggered by animal studies or by epidemiological findings
Reproductive toxicity	Based on the available data, the classification criteria are not met.
STOT - single exposure	Based on the available data, the classification criteria are not met.
STOT - repeated exposure	Based on the results from animal studies (mainly via intratracheal administration) it seems that the severity of effects seen in the lungs may be related to the level of crystalline silica (fine fraction) present in the material as an accessory mineral. Epidemiological studies show that exposure to high levels of kaolinitic clay dust may lead to pneumoconiosis. Results indicate that the effects from kaolinitic clay exposure are typical of those seen with poorly soluble particles under conditions of lung overload i. e. the lungs clearance capacity has been exceeded. It is likely that the severity of any effects is related to the level of crystalline silica (fine fraction) present in the material as an accessory mineral
Aspiration hazard	Based on the available data, the classification criteria are not met.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

No data available

11.2.2 Other information

No data available

SECTION 12: Ecological information

12.1 Toxicity	
12.1.1 Acute/Prolonged toxicity to fish	LC_{50} (96h) for freshwater fish (rainbow trout Oncorhynchus mykiss): > 1000 mg/L (Method OECD 203)
12.1.2 Acute/Prolonged toxicity to aquatic invertebrates	EC_{50} (48h) for aquatic invertebrates (Daphnia magna): > 1000 mg/L (Method OECD 202)
12.1.3 Acute/Prolonged toxicity to aquatic plants	EC_{50} (72h) for freshwater algae (Raphidocelis Subcapitata): > 1000 mg/L (Method OECD 201)
12.1.4 Toxicity to micro-organisms e.g. bacteria	No data available
12.1.5 Chronic toxicity to aquatic organisms	No data available
12.1.6 Toxicity to soil dwelling organisms	No data available
12.1.7 Toxicity to terrestrial plants	No data available
12.1.8 General effect	No specific adverse effects known.
12.2 Persistence and degradability	No data available
12.3 Bioaccumulative potential	No data available
12.4 Mobility in soil	Negligible
12.5 Results of PBT and vPvB assessment	This substance does not meet the criteria for classification as PBT or vPvB.
12.6 Endocrine disrupting properties	No data available
12.7 Other adverse effects	No other adverse effects are identified.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Kaolinitic clay may be reused if it is not contaminated or otherwise degraded. Waste disposal methods are not applicable here. It must not be disposed of in the sewage system or surface water.

Product treatment- unused residues or spilled material
Collect any dry unused residue or spilled dry material. The material can be reused taking into consideration its shelf life and the requirement to prevent dustiness. In case of product contamination, clean it in accordance with the waste legislation.

Packaging treatment - completely empty, remove in accordance with the applicable legislation.
Prevent its penetration into the wastewater system

Waste legislation – Decree 2000/532/EC establishing a list of wastes, as amended.

SECTION 14: Transport information

14.1 UN number or ID number	Not relevant
14.2 UN proper shipping name	Not relevant
14.3 Transport hazard class(es)	ADR: Not classified IMDG: Not classified ICAO/IATA: Not classified RID: Not classified

14.4 Packaging group	Not applicable
14.5 Environmental hazards	Not relevant
14.6 Special precautions for user	Transport in conventional covered means of transport protected against the elements. Other safety measures according to Sections 6 and 8.
14.7 Maritime transport in bulk according to IMO instruments	Not relevant

SECTION 15: Regulatory information

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

Regulation (EC) No. **1907/2006** of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals, establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Regulation Council Regulation (EEC) No. 793/93, Commission Regulation (EC) No. 1488/94, Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC, and 2000/21/EC, as amended.

Regulation (EC) No. **1272/2008** of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC and amending Regulation (EC) No. 1907/2006, as amended.

15.2 Chemical safety assessment

Has not been done.

SECTION 16: Other information

16. 1 Indication of the changes made to the previous version of the MSDS

Regulation (EC) 1272/2008 and Regulation (EC) 453/2010
Version 07.1 - Expansion of trade names
Version 07.2 - In full accordance with Regulation (EC) 830/2015
Version 07.3 - Expansion of trade names
Most of the 16 SECTIONS have been updated and formatted according to the revised ECHA Guidance on the compilation of safety data sheet. Therefore, this SDS has been completed redrafted and replaced the former SDS (version 07.2) supplied.
Version 08.0 – 1.1, 9.1, 9.2, 15.1, 16.3, and 16.7, most of the 16 sections were updated in accordance with revised Annex II to the REACH Decree
Version 09.0 – 1.1, 2.1, 2.3, 7.1, 9.1, 11.2, 12.6, 14.1, 15.2

Reasons to change the version of the safety data sheet:
COMMISSION REGULATION (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No. 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorization, and Restriction of Chemicals (REACH)**.**

16. 2 Abbreviations and acronyms

EC_{50}	median effect concentration
LC_{50}	median lethal concentration
LD_{50}	median lethal dose
OEL	occupational exposure limit
PBT	persistent bioaccumulative toxic
REACH	Regulation (ES) 1907/2006
RCS	respirable crystalline silica
STOT RE	specific target organ toxicity – repeated
vPvB	very persistent/very bioaccumulative
UVCB	Substances of unknown or variable composition

16. 3 Relevant H-phrases (number and full text)

EUH066: Repeated exposure may cause skin dryness or cracking.

EUH210: Safety data sheet available on request.

EUH212: Caution! Hazardous respirable dust may form during use. Do not inhale dust.

16. 4 Third party material

Insofar as materials not manufactured or supplied by LB MINERALS, GmbH. are used in conjunction with, or instead of LB MINERALS, GmbH materials, it is the responsibility of the customer himself to obtain, from the manufacturer or supplier, all technical data and other properties relating to these and other materials and to obtain all necessary information relating to them. No liability can be accepted in respect of the use of LB MINERALS, GmbH's kaolinitic clay in conjunction with materials from another supplier.

16. 5 Liability

Such information is to the best of LB MINERALS, GmbH's knowledge and believed accurate and reliable as of the date indicated. However, no representation, warranty or guarantee is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use.

16. 6 Training

Workers must be informed of the presence of crystalline silica and trained in the proper use and handling of this product as required under applicable regulations.

16. 7 Further information

The permissible exposure limit for the total concentration (respirable fraction) of dust (particle size 1–100 µm) is called PEL_c, for the respirable dust fraction PEL_r. The inhalable dust fraction is an aggregate of particles of airborne dust, which can be inhaled through the nose or mouth. Respirable fraction means the mass fraction of inhaled particles (size less than 5 µm) that penetrate the part of the airways where there is no ciliated epithelium and into the alveoli according to EN 1540 Occupational exposure - Terminology.
Prolonged and/or massive exposure to respirable crystalline silica-containing dust may cause silicosis, a nodular pulmonary fibrosis caused by deposition in the lungs of fine respirable particles of crystalline silica.

In 1997, IARC (the International Agency for Research on Cancer) concluded that crystalline silica inhaled from occupational sources can cause lung cancer in humans (human carcinogen category 1). However, it pointed out that not all industrial circumstances, nor all crystalline silica types, were to be incriminated. (IARC Monographs on the evaluation of the carcinogenic risks of chemicals to humans, Silica, silicates dust and organic fibres, 1997, Vol. 68, IARC, Lyon, France.). In 2009, in the Monographs 100 series, IARC confirmed its classification of Silica Dust, Crystalline, in the form of Quartz and Cristobalite (IARC Monographs, Volume 100C, 2012).

In June 2003, SCOEL (the EU Scientific Committee on Occupational Exposure Limits) concluded that the main effect in humans of the inhalation of respirable crystalline silica dust is silicosis. "There is sufficient information to conclude that the relative risk of lung cancer is increased in persons with silicosis (and, apparently, not in employees without silicosis exposed to silica dust in quarries and in the ceramic industry). Therefore preventing the onset of silicosis will also reduce the cancer risk…" (SCOEL SUM Doc 94-final, June 2003). So, there is a body of evidence supporting the fact that increased cancer risk would be limited to people already suffering from silicosis. Worker protection against silicosis should be assured by respecting the existing regulatory occupational exposure limits and implementing additional risk management measures where required (see section 16 below).

A multi-sectoral social dialogue agreement on Workers Health Protection through the Good Handling and Use of Crystalline Silica and Products Containing it was signed on 25 April 2006. This autonomous agreement, which received the European Commission's financial support, is based on a Good Practices Guide. The requirements of the Agreement came into force on 25 October 2006. The Agreement was published in the Official Journal of the European Union (2006/C 279/02). The text of the Agreement and its annexes, including the **Good Practices Guide**, are available from http://www.nepsi.eu and provide useful information and guidance for the handling of products that may generate respirable dust of crystalline silica. Literature references are available on request from EUROSIL, the European Association of Industrial Silica Producers.

Disclaimer

This safety data sheet (SDS) is based on the legal provisions of the REACH Regulation (EC 1907/2006; article 31 and Annex II), as amended. Its contents are intended as a guide to the appropriate precautionary handling of

the material. It is the responsibility of recipients of this SDS to ensure that the information contained therein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. Information and instructions provided in this SDS are based on the current state of scientific and technical knowledge at the date of issue indicated. It should not be construed as any guarantee of technical performance, suitability for particularapplications, and does not establish a legally valid contractual relationship. This version of the SDS supersedes all previous versions.

End of the material safety data sheet