LB MINERALS, s.r.o.

Safety Data Sheet in compliance with Regulation (EC) 1907/2006, Regulation (EC) 1272/2008

Name of the product: Kaolinitic clay *(plastic clay, ball clay, fine clay)*
Version **07.2**
Revision date ***May 2017***

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 ext., AGB/B, AGB/KR1, AGB/L, AGL, AGW/A, AGX, B1, B10, B12, B14, B2, B20, B21 ,B23, B2W, B3, B4, BF, BK, BKK, BN, BRC, BS, BS/3, BS/4, GAL, GE, GEC, GEM, GEP, GM, HC, HC/R, HCN, HDC, HDR, CH, IB, IBN, IBN/Z, IBV, JHD, K, KAC, KM, KOP, KYB, KYS, KZ, LEC, LED, Lhota, LIS, MIC, MM, MM-B, MM-R ,MMS, MP, NF, NO, PLT, R, SAN42, SAN43, SE1, SE2, TES, ULK, VIZ, WEI, WIR, WIS/R, ZDM, ZIC**

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

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 insertse.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 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
Fax N°:	+420 377 956 332
E-mail of competent person responsible for SDS in the MS or in the EU:	msds@cz.lasselsberger.com

1.4 Emergency telephone number:

European Emergency N°:	112	
National centre for Prevention and Treatment of Intoxications N°:	Toxicology Information Centre (TIS) Na Bojišti 1, 128 08 Prague 2, ČR E-mail: tis@mbox.cesnet.cz	+420 224 919 293 (non-stop) +420 224 915 402 (non-stop)
Available outside office hours:	☒ Yes	❑ No

SECTION 2. Hazards Identification

2.1 Classification of the substance:

2.1.1 Classification according to Regulation (EC) No 1272/2008 [CLP]
Not classified as hazardous

2.1.2 Additional information
None

2.2 Label elements
Labelling according to Regulation (EC) No 1272/2008 [CLP]
None

2.3 Other hazards
The substance does not meet the criteria for PBT or vPvB substance.
No other hazards identified.

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% of quartz-fine fraction (CAS: 14808-60-7; EC: 238-878-4) which is self-classified as STOT RE1.).

SECTION 4. First aid measures

4.1 Description of first aid measures

General notes:
No known delayed effects. Consult a physician for all exposures except for minor instances.

Following inhalation:
Move source of dust or move person to fresh air. Obtain medical attention immediately.

Following skin contact:
No special first aid measures necessary.

Following eye contact:
Rinse with copious quantities of water and seek medical attention if irritation persists.

Following ingestion:
No special measure; rinse mouth with water. Seek medical advice if any discomfort continues.

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. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media:
Use a dry water, powder, foam or CO2 fire extinguisher to extinguish the surrounding fire.

Unsuitable extinguishing media:
No restriction on the extinguishing media to be used.

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

6.1.1 For non-emergency personnel
Ensure adequate ventilation.
Keep dust levels to a minimum.
Keep unprotected persons away.
Avoid contact with skin, eyes, and clothing – wear suitable protective equipment (see section 8).
Avoid inhalation of dust – ensure that sufficient ventilation or suitable respiratory protective equipment is used, wear suitable protective equipment (see section 8).
Take care of wet product on floor, which presents a slip hazard.

6.1.2 For emergency responders
Keep dust levels to a minimum.
Ensure adequate ventilation.
Keep unprotected persons away.
Avoid contact with skin, eyes, and clothing – wear suitable protective equipment (see section 8).
Avoid inhalation of dust – ensure that sufficient ventilation or suitable respiratory protective equipment is used, wear suitable protective equipment (see section 8).
Take care of wet product on floor, which presents a slip hazard.

6.2 Environmental precautions

No special environmental measures are necessary.
Contain the spillage. If product is released from trucks in roads, place signposts to divert traffic and remove the spill using vacuum cleaning systems.

6.3 Methods and material for containment and cleaning up

Avoid dust formation; avoid dry sweeping.
Use vacuum suction unit, or shovel into bags.

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 Protective measures
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
Keep dust levels to a minimum. Minimize dust generation.
General occupational hygiene measures are required to ensure safe handling of the substance. These measures involve good personal and housekeeping practices (i.e. regular cleaning with suitable cleaning devices), no drinking, eating and smoking at the workplace. Shower and change clothes at end of work shift. Do not wear contaminated clothing at home.

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 so as to prevent accidental bursting.
Store in a dry covered area it may be stored for unlimited periods.

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).

8.1.1 Components with occupational exposure limits rsp. biological occupational exposure limits requiring monitoring

8.1.1.1 Occupational exposure limits:

Air limit values: Maintain personal exposure below occupational exposure limits for dust (inhalable and respirable) as dictated in the national legislation.

The **OEL_r * /OEL_t** (Occupational Exposure Limit - other quartzes with the exception of asbestos)
for respirable crystalline silica dust is 2,0 /10,0 mg/m³
* *SiO_2 contents in respirable fraction ≤ 5% (valid in the CZ)*
OEL_r ** / OEL_t (Occupational Exposure Limit - other quartzes with the exception of asbestos) 10,0 : F_r / 10,0 mg/m³
** *SiO_2 contents in respirable fractions >5% (valid in the CZ)*
F_r – fibrogenetic component contents in respirable fractions %
The OEL (Occupational Exposure Limit) measured as an 8 hour TWA (Time Weighted Average).

For the equivalent limits in other countries, please consult a competent occupational hygienist or the local regulatory authority.

Biological limit values
None.

8.1.2 Recommended monitoring procedures
None.

8.1.3 Occupational exposure limits and/or biological limits if air contaminants are formed
Not applicable.

8.1.4 DNEL/DMEL and PNEC-values
None.

8.2 Exposure controls

8.2.1. Appropriate engineering controls

Minimise airborne dust generation. Use process enclosures, local exhaust ventilation or other engineering controls to keep airborne levels below specified exposure limits. If user operations generate dust, fumes or mist, use ventilation to keep exposure to airborne particles below the exposure limit. Apply organisational measures, e.g. by isolating personnel from dusty areas. Remove and wash soiled clothing.

8.2.2. Individual protection measures, such as personal protective equipment

8.2.2.1 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.

8.2.2.2 Skin & hands protection
For skin, normal work clothes are appropriate.
For hands, appropriate protection (e.g. PVC, neoprene or natural rubber gloves) is recommended for workers who suffer from dermatitis or sensitive skin. Wash hands at the end of each work session.

8.2.2.3. Respiratory protection
Local ventilation to keep levels below established threshold values is recommended.
In case of prolonged exposure to airborne dust concentrations, a suitable particle filter mask type FFP1 or FFP3 (European Norm 143) or that complies with the requirements of national legislation is recommended.

8.2.2.4 Thermal hazards
The substance does not represent a thermal hazard, thus special consideration is not required.

8.2.3 ENVIRONMENT EXPOSURE CONTROLS
All ventilation systems should be filtered before discharge to atmosphere. Avoid releasing to the environment. Contain the spillage.

SECTION 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance:	White or off white solid (bulk, lumps, pellets, granulates or powder)
Odour:	odourless
Odour threshold:	not applicable as the substance is odourless
pH:	6.2 (0.12% solids in water suspension)
Melting point:	> 450 °C (study result, EU A.1 method)
Boiling point:	not applicable (solid with a melting point > 450 °C)
Flash point:	not applicable (solid with a melting point > 450 °C)
Evaporation rate:	not applicable (solid with a melting point > 450 °C)
Flammability:	non flammable (study result, EU A.10 method)
Explosive limits:	non explosive (void of any chemical structures commonly associated with explosive properties)
Vapour pressure:	not applicable (solid with a melting point > 450 °C)
Vapour density:	not applicable (solid with a melting point > 450 °C)
Relative density:	2.6 g/cm³
Bulk density:	0.5 – 0.8 g/cm³
Solubility in water:	<1 mg/L at 20°C (study results, EU A.6 method)
Partition coefficient n-octanol/water:	not applicable (inorganic substance)

Auto ignition temperature:	no relative self-ignition temperature below 400 °C (study result, EU A.16 method)
Decomposition temperature:	not applicable (solid with a melting point > 450 °C)
Viscosity:	not applicable (solid with a melting point > 450 °C)
Explosive properties:	No chemical groups within the structure of the substance that would imply explosive properties
Oxidising properties:	no oxidising properties (Based on the chemical structure, the substance does not contain a surplus of oxygen or any structural groups known to be correlated with a tendency to react exothermally with combustible material)

9.2 Other information
None.

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
No hazardous reactions

10.4 Conditions to avoid
None

10.5 Incompatible materials
None

10.6 Hazardous decomposition products
None

SECTION 11. Toxicological information

11.1 Information on toxicological effects

Toxicity endpoints	Outcome of the effects assessment	
Acute toxicity	Oral Dermal Inhalation	LD50 > 5000 mg/kg bw (OECD 401, rat) No data available No data available
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	No data available	
Germ cell mutagenicity	No data available	
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	No data available.	
STOT - single exposure	No data available.	

Toxicity endpoints	Outcome of the effects assessment
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 are related to the level of crystalline silica (fine fraction) present in the material as an accessory mineral
Aspiration hazard	No data available

SECTION 12. Ecological information

12.1 Toxicity

12.1.1 Acute/Prolonged toxicity to fish
LC50 (96h) for freshwater fish (rainbow trout Oncorhynchus mykiss): >1000 mg/L (Method OECD 203)

12.1.2 Acute/Prolonged toxicity to aquatic invertebrates
EC50 (48h) for aquatic invertebrates (Daphnia magna): >1000 mg/L (Method OECD 202)

12.1.3 Acute/Prolonged toxicity to aquatic plants
EC50 (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
Abiotic Degradation:
The substance is inorganic and therefore will not undergo abiotic degradation.
Biodegradation:
The substance is inorganic and therefore will not undergo biodegradation.

12.3 Bioaccumulative potential
Not relevant for inorganic substances. Bioaccumulation is not expected.

12.4 Mobility in soil
Kaolinitic clay is almost insoluble and thus presents a low mobility in most soils.

12.5 Results of PBT and vPvB assessment
This substance does not meet the criteria for classification as PBT or vPvB.

12.6 Other adverse effects
No other adverse effects are identified.

SECTION 13. Disposal considerations

13.1 Waste treatment methods

Wastes should be handled in accordance with local and national regulations.
Dispose of waste in such a way to avoid dust generation. Where possible, recycling should be preferred to disposal.

Packaging treatment
No specific requirements. In all cases dust formation from residues in the packaging should be avoided and suitable protection be assured.

SECTION 14. Transport information

The material is not classified as a dangerous substance and no restrictions apply for land/sea/air transportation. Avoid dust spreading.

14.1 UN 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 users
Avoid any release of dust during transportation, by using air-tight tanks for powders and covered trucks for pebbles.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not regulated.

SECTION 15. Regulatory information

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

INTERNATIONAL LEGISLATION/ REQUIREMENTS
Regulation (EC) 1907/2006, Regulation (EC) 1272/2008, Regulation (EC) 453/2010 and Regulation (EC) 830/2015

15.2 Chemical safety assessment
Kaolinitic clay is exempted from REACH registration in accordance with Annex V.7 of Regulation (EC) 1907/2006. Thus, no formal chemical safety assessment has been carried out for this substance by the supplier.

SECTION 16. Other information

Data are based on our latest knowledge but do not constitute a guarantee for any specific product features and do not establish a legally valid contractual relationship.

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

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
Most of the 16 SECTIONS have been updated and formated according to the revised ECHA Guidance on the compilation of safety data sheet (version 3.0 of August 2015). Therefore, this SDS has been completed redrafted and replaced the former SDS (version 07.2) supplied.

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
TWA:	time weighted average
vPvB:	very persistent, very bioaccumulative

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

None.

16. 4 Third party material

Insofar as materials not manufactured or supplied by LB MINERALS, s.r.o. are used in conjunction with, or instead of LB MINERALS, s.r.o. 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, s.r.o. 's kaolinitic clay in conjunction with materials from another supplier.

16. 5 Liability

Such information is to the best of LB MINERALS, s.r.o.'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

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 particular applications, and does not establish a legally valid contractual relationship. This version of the SDS supersedes all previous versions.

End of the safety data sheet