PRODUCT SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006,
Regulation (EC) No. 1272/2008 and Regulation (EU) 2020/878

KERAMOST

PRODUCT NAME:

Metakaolin KM 60

ISO 9001
ISO 14001
ISO 45001
CERTIFIED
ZÚS

Date of publication:	December 1, 2008	**Date of printing:**	October 24, 2025	**Date of revision:**	October 21, 2025

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

1.1 Product identifier: Kaolin calcined
CAS number: 92704-41-1
EG number (EINECS): 296-473-8
REACH Registration number: Exempted in accordance with Annex V.7

1.2 Relevant identified uses of the substance or mixture:
Building industry, rubber industry, refractory materials, chemical industry.
Uses advised against:
There are no uses advised against.

1.3 Details of the supplier of the safety data sheet:

Name:	KERAMOST, a.s.
Address:	Žatecká 1899/25, 434 30 Most, CZ
Identification number:	49901222
Phone:	+420 476 442 511
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1.4 Emergency telephone number:
Toxicology information centre (TIC) +420 224 919 293, +420 224 915 402 (non-stop)

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:
Depending on the handling and use (grinding, drying, bagging), airborne respirable dust may be generated. Dust contains respirable crystalline silica. Prolonged and or massive inhalation of respirable crystalline silica dust may cause lung fibrosis, commonly referred to as silicosis. Principal symptoms of silicosis are cough and breathlessness. Occupational exposure to respirable dust should be monitored and controlled. The product should be handled using methods and techniques that minimize or eliminate dust generation.

The product contains less than 1% w/w RCS (respirable crystalline silica) as determined by the SWERF method. The respirable crystalline silica content can be measured using the “Size-Weighted Respirable Fraction – SWERF” method. All details about the SWERF method is available at www.crystallinesilica.eu.

Regulation EC 1907/2006 (REACH)	Not classified – is not hazardous substance.
Regulation EC 1272/2008 (CLP)	Doesn’t meet the criteria for classification.
Directive 67/548/EEC	It is not classified as a dangerous substance or mixture.

2.2 Label elements: Not applicable – not required.

2.3 Other hazards:
Inorganic material of natural origin. The substance does not meet the criteria for PBT or vPvB substance. No other hazards identified. Metakaolin is not known to have an adverse effect on the endocrine system in accordance with the criteria stated within Regulation (EU) 2017/2100 or Regulation (EU) 2018/605.

The most severe adverse reactions to human health when using the material/preparation:
Dust can cause irritation of eyes and of airways mucosa.
The most severe adverse reaction to the environment when using the material/preparation:
None were observed.

SECTION 3: COMPOSITION / INFORMATION ON ENGREDIENTS

3.1 Substances:
Metakaolin is a UVCB substance (substances of Unknown or Variable composition, Complex reaction products or Biological materials). Metakaolin is a material shaped from a natural raw-material kaolinite by means of its calcination at temperatures above 500 °C. It is a transition metastable phase. On the contrary to the mineral kaolinite the metakaolin shows a very little expressive crystal structure similar to kaolinite – it has more or less amorphous character. At the same time a partial consolidation caused by dehydration of the original material shows up. The substance / mixture is not classified according to Regulation (EC) 1272/2008. There is no multiplication coefficient (M-factor) or specific concentration limit (SCL).

3.2 General component:	Kaolin calcined
CAS number:	92704-41-1
EG number (EINECS):	296-473-8
Content (%)	100 %
3.3 Content of hazardous substances:	Not known. Contains less than 1% of respirable crystalline silica.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures:
General advice:
Material hygienically unobjectionable, with hyperirritability of mucosa.
Following inhalation:
Leave the dusty room.
Following skin contact:
Wash out skin with soap and water.
Following eye contact:
Wash out with lukewarm water, should the problems last, seek medical advice.
Following ingestion:
Wash out the mouth, drink a considerable volume of water, do not provoke emesis.

4.2 Most important symptoms and effects, both acute and delayed:
The acute symptoms would 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:
If health problems occur or in case of doubts, seek medical help and provide information contained in this safety data sheet.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media:
Suitable extinguishing media: No restrictions. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media: No restrictions.

5.2 Special hazards arising from the substance or mixture:
The material is not flammable and does not support fire. No 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:
Ensure adequate ventilation. Keep dust levels to a minimum. Keep unprotected persons away. Avoid inhalation of dust and contact with skin, eyes, and clothing – wear suitable protective equipment (see section 8). Take care of wet product on floor, which presents a slip hazard.

6.2 Environmental precaution:
No special requirement.

6.3 Methods and material for containment and cleaning up:
Avoid dust formation (avoid dry sweeping). Remove mechanically dust free (use vacuum suction unit, or shovel into bags) and wash down the surface with water.

6.4 Reference to other sections:
For more information please check sections 7, 8 and 13 of this safety data sheet.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:

Protective measures:
Avoid dust generation and contact with eyes. Provide appropriate exhaust ventilation or wear suitable respiratory protective equipment at places where airborne dust is generated. The composition of the mixture ensures the explosion-proofing and incombustibility. Handle packaged products carefully to prevent accidental bursting.

Advice on general occupational hygiene:
Regular cleaning with suitable cleaning devices. Shower and change clothes at end of work shift. Do not wear contaminated clothing at home. No drinking, eating and smoking at the workplace.

7.2 Conditions for safe storage, including any incompatibilities:
Minimize airborne dust generation and prevent wind dispersal during loading and unloading. Keep containers closed and store packaged products so as to prevent accidental bursting. Storage in dry storehouse or shed without direct attack of climatic influence.

7.3 Specific end use(s):
Not relevant.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters:
According to Government regulation No. 361/2007, and Government regulation No. 93/2012.

Permissible exposure limit (8 hours TWA)	PEL_r (respirable fraction)	PEL_t (total amount)
Other quartzes (with the exception of asbestos)	for $F_r \leq 5$ % = 2 mg/m^3 for $F_r > 5$ % = 10:F_r	10 mg/m^3

8.1.1 Components with occupational exposure limit values:

a) Exposure limit values in the air:
The binding European occupational exposure limit for respirable crystalline quartz dust is set at 0.1 mg / m^3 by Directive (EU) 2017/2398. Observe occupational exposure below the limit value for all types of airborne dust (e.g. respirable dust, fine dust, fine quartz dust, fine cristobalite dust) as required by national regulations. Contact the responsible hygienist or local regulatory authority to check the applicable national limits.

Permissible dust exposure limits (8 hours TWA) in mg/m^3	Unspecified (inert) dust INHALABLE	Unspecified (inert) dust RESPIRABLE
Austria	10	5
Belgium	10	3
Bulgaria		4
Denmark	10	5
Finland	10	/
France	10	5
Germany	10	0,5 *
Greece	10	5
Ireland	10	4
Italy	10	3
Lithuania		10
Luxembourg	10	6
Holland	10	5
Norway	10	5
Poland	10	/
Portugal	10	5
Romania		10

Permissible dust exposure limits (8 hours TWA) in mg/m³	Unspecified (inert) dust INHALABLE	Unspecified (inert) dust RESPIRABLE
Slovakia	10	
Spain	10	3
Sweden	5	2,5
Switzerland		6
Great Britain	10	4

∗ *Defined for a density of 1 g/cm³, i.e. for minerals with a common density of 2,5 g/cm³, a calculated OEL of 1,25 mg/m³ applies.*

Further information on national exposure limit values:
https://nepsi.eu/wp-content/uploads/2022/10/oel_full_table_september_2020_europe.pdf

b) Biological limit values: None

8.1.2 Appropriate technical control: None

8.1.3 Exposure limit values and / or biological limit values for contaminated air: Not available

8.1.4 Values of DNEL/DMEL and PNEC: Not available

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. If user operations generate dust, use ventilation to keep exposure to airborne particles below the exposure limit. Apply organizational measures e.g. by isolating personnel from dusty areas. Remove and wash soiled clothing

8.2.2 Individual protection measures:
Eye / face protection:
Do not wear contact lenses. If there is an increased risk of eyes contact, use tight fitting goggles with side shields. Ensure accessibility of eyewash equipment and safety showers close to the work place.
Skin and hands protection:
Wear suitable work clothes with long sleeves, gloves. At the end of each work session wash skin with soap and water. Eventually use a greasy cream – the material dries the skin.
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 that complies with the requirements of national legislation is recommended, depending on the expected exposure levels - Category 2 or 3 (FP2 - FP3). See EN 143:2000 - Respiratory protective equipment.

8.2.3 Environmental exposure controls:
All ventilation systems should be filtered before discharge to atmosphere. Avoid releasing to the environment. Ensure that spilled material is removed.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance (at 20°C):	Powder
Color:	White
Odour:	No specific smell
Melting point:	Not applicable (solid with a melting point > 450 °C)
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
Auto ignition temperature:	No relative self-ignition temperature
Explosive limits:	Non explosive
Oxidising properties:	No oxidising properties
Vapour pressure:	Not applicable (solid with a melting point > 450 °C)
Density – specific gravity	2500 - 2800 kg/m³
Solubility:	
- in water	Yes
- in grease	Not known
Distributing coefficient n-octanol/water:	Not known

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity:	Inert and not reactive material.
10.2 Chemical stability:	The substance is stable under normal conditions.
10.3 Possibility of hazardous reactions:	Not known.
10.4 Conditions to avoid:	Slippery when wet. Minimise exposure to air and dust generation.
10.5 Incompatible materials:	Not reactive. Avoid storing together with materials that may be affected by dust.
10.6 Hazardous decomposition products:	Not known.

SECTION 11: TOXICOLOGICAL INFORMATION

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

a) **Acute toxicity:**
Classification criteria are not met according to available information.

b) **Skin corrosion/irritation:**
Classification criteria are not met according to available information.

c) **Serious eye damage / irritation:**
Classification criteria are not met according to available information.

d) **Respiratory or skin sensitisation:**
Classification criteria are not met according to available information.

e) **Germ cell mutagenicity:**
Classification criteria are not met according to available information.

f) **Carcinogenicity:**
Classification criteria are not met according to available information.

g) **Toxicity for reproduction:**
Classification criteria are not met according to available information.

h) **STOT – single exposure:**
Classification criteria are not met according to available information.

i) **STOT – repeated exposure:**
Classification criteria are not met according to available information.

j) **Aspiration hazard:**
Classification criteria are not met according to available information.

11.1.1 Symptoms related to the physical, chemical and toxicological characteristics:

- **If swallowed:** No data available.
- **If in eyes:** No data available.
- **If inhaled:** Inhalation of dust may cause irritation of the respiratory system.
- **If on skin:** No data available.
- **Other information:** No data available.

11.2 Information on other hazards:

11.2.1 Endocrine disrupting properties:
The substance is not identified to have endocrine disrupting properties according to Regulation (EU) 217/2100 or Commission Regulation (EU) 2018/605 nor is included in the Candidate List of substances of very high concern according to EU Reach Article 59 for having endocrine disrupting properties.

11.2.2 Other information:
No data available.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity:	Not relevant.
12.2 Persistence and degradability:	Not relevant.
12.3 Bioaccumulative potential:	Not relevant.
12.4 Mobility in soil:	Not relevant.
12.5 Results of PBT and vPvB assessment:	Not relevant.
12.6 Endocrine disrupting properties:	Adverse effects are not known.
12.7 Other adverse effects:	Not relevant.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

The residues/unused product can be disposed in landfills following national and local regulations. Dispose in such a way to avoid dust generation. Where possible, recycling should be preferred to disposal.

Substance / preparation disposal:

Storage category 0.

Contaminated packing disposal:

Secondary utilization, storing, incineration. 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, IMDG, ICAO/IATA, RID – Not classified. Metakaolin is not hazardous in the sense of transport regulations. Material is not explosive. Transport in usual covered transport means protected against climatic influences.

14.4 Packing group:

Not applicable.

14.5 Environmental hazards:

Not relevant.

14.6 Special precautions for user:

Avoid any release of dust during transportation. Other safety measures according to Section 6 and 8.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code:

Not regulated.

SECTION 15: REGULATORY INFORMATION

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

Regulation (EC) No. 1907/2006, Regulation (EC) No. 1272/2008, Regulation (EU) 2020/878, Government regulation (CZ) No. 361/2007, and Government regulation No. 93/2012.

15.2 Chemical safety assessment:

Metakaolin is exempted from REACH registration in accordance with Annex V.7. Metakaolin is not hazardous substance and has no restrictions on use. Composition entirely from natural minerals without any chemical additives

SECTION 16: OTHER INFORMATION

16.1 Information about revision of safety data sheet:

Changes in terminology and requirements according to Regulation (EU) 2020/878 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council.

16.2 Disclaimer:

The data herein correspond to the present state of knowledge and experience and they are in conformity with valid legal enactments. They are not however comprehensive. When mixing with other products, it is to control whether further health and safety risks cannot occur. This safety data sheet does not represent a guarantee of product's properties. 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. This version of the SDS supersedes all previous versions.

16.3 Abbreviations:

ADR – European Agreement concerning the International Carriage of Dangerous Goods by Road
CLP – Regulation of European parliament and Council for Classification, Labeling and Packaging of chemicals
Fr – Fibrogenetic component contents in respirable fractions
GHS – Globally Harmonized System of Classification and Labeling of Chemicals
IBC – International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
ICAO/IATA – International Civil Aviation Organization / International Air Transport Association
IMDG – International Maritime Dangerous Goods Code
PBT – Persistent, Bioaccumulative and Toxic substances
PELt – Permissible Exposure Limit, total amount
PELr – Permissible Exposure Limit, respirable fraction
REACH – EU Regulation about Registration, Evaluation, Authorisation and Restriction of Chemicals
RID – Regulations Concerning the International Carriage of Dangerous Goods by Rail
SWERF – Size-Weighted Respirable Fraction
TWA – Time-Weighted Average
UN – Numbers that identify hazardous substances, and dangerous articles in the framework of international transport.
UVCB – Substances of Unknown or Variable composition, Complex reaction products or Biological materials
vPvB – very Persistent and very Bioaccumulative substances