

BENTONITE

1. Chemical Product and Company Identification:

Product identifier

Identification of the substance Bentonite, pure

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

Laboratory chemical

Laboratory and analytical use

Uses advised against: Do not use for private purposes (household).
Food, drink and animal feedingstuffs.

Details of the supplier of the safety data sheet

ENTAJ FEED & RAW MATERIALS MANUFACTURING CO.

ADDRESS: AMMAN – BUILDING 2477, OFFICE 118210

LICENSE NO.: 202618787

2. Hazard(s) identification

Classification of the substance or mixture Classification acc. to GHS

This substance does not meet the criteria for classification.

Label elements

Category 4

Category 2

Labelling not required

Other hazards

Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of $\geq 0,1\%$.



3- Composition/Information on Ingredients

Substances

Name of substance	Bentonite
Molecular formula	$H_2Al_2O_6Si$
Molar mass	180,1 g/mol
CAS No	1302-78-9
EC No	215-108-5

4. First aid measures

Description of first aid measures

General notes

No special measures are necessary.

Following inhalation

Provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.

Following skin contact

Rinse skin with water/shower.

Following eye contact

Rinse cautiously with water for several minutes. In all cases of doubt, or when symptoms persist, seek medical advice.

Following ingestion

Rinse mouth. Call a doctor if you feel unwell.

Most important symptoms and effects, both acute and delayed

Symptoms and effects are not known to date.

Indication of any immediate medical attention and special treatment needed

none



5. Fire Fighting Measures

Extinguishing media

Suitable extinguishing media

Co-ordinate firefighting measures to the fire surroundings! Water, foam, dry extinguishing powder, ABC-powder

Unsuitable extinguishing media

Water jet

Special hazards arising from the substance or mixture

Non-combustible.

Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Fight fire with normal precautions from a reasonable distance.

Wear self-contained breathing apparatus.

6. Accidental release measures

For non-emergency personnel

No special measures are necessary.

Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains. Take up mechanically.

Advice on how to clean up a spill

Take up mechanically.

Other information relating to spills and releases

Place in appropriate containers for disposal.

Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.



7. Handling and storage

Precautions for safe handling

No special measures are necessary.

Advice on general occupational hygiene

Keep away from food, drink and animal feedingstuffs.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Exposure limits are exceeded or if irritation or other symptoms are experienced.

Conditions for safe storage, including any incompatibilities

Store in a dry place.

Incompatible substances or mixtures

Observe hints for combined storage. Incompatible materials: see section 10. Consideration of other advice:

Specific designs for storage rooms or vessels

Recommended storage temperature: 15 – 25 °C

Specific end use(s)

No information available.

8. Exposure controls/personal protection

Control parameters National limit values

Occupational exposure limit values (Workplace Exposure Limits)

This information is not available.

Exposure controls

Individual protection measures (personal protective equipment) Eye/face protection

Use safety goggle with side protection.

Skin protection

• hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374.

• type of material NBR (Nitrile rubber)

• material thickness

>0,11 mm

• breakthrough times of the glove material

>480 minutes (permeation: level 6)



• other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

Respiratory protection

Respiratory protection necessary at: Dust formation. Particulate filter device (EN 143). P1 (filters at least 80% of airborne particles, color code: White).

Environmental exposure controls

Keep away from drains, surface and ground water.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state	solid
Form	powder
Color	beige
Odour	odorless
Melting point/freezing point	not determined
Boiling point or initial boiling point and boiling range	not determined
Flammability	non-combustible
Lower and upper explosion limit	not relevant (solid)
Flash point	not applicable
Auto-ignition temperature	not determined
Decomposition temperature	>150 °C
pH (value)	6 – 11 (in aqueous solution: 20 g/l, 20 °C)
Kinematic viscosity	
Solubility(is)	not relevant
Water solubility	
Partition coefficient	(insoluble (< 1 mg/l))
Partition coefficient n-octanol/water (log value):	not relevant (inorganic)
Vapor pressure	
Density and/or relative density not determined	
Density	2,5 g/cm ³ at 20 °C
Relative vapors density not relevant (solid)	
Particle characteristics	
Other safety parameters	No data available.
Oxidizing properties	none

Other information

Information with regard to physical hazard classes: hazard classes acc. to GHS (physical hazards): not relevant

Other safety characteristics: There is no additional information.



10. Stability and reactivity

Reactivity

This material is not reactive under normal ambient conditions.

Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Possibility of hazardous reactions

No known hazardous reactions.

Conditions to avoid

Keep away from heat. Decomposition takes place from temperatures above: >150 °C.

Incompatible materials

There is no additional information.

Hazardous decomposition products

Hazardous combustion products: see section 5.

11. Toxicological information

Information on toxicological effects

Classification acc. to GHS

This substance does not meet the criteria for classification.

Acute toxicity

Shall not be classified as acutely toxic.

Acute toxicity

EXPOSURE ROUTE	ENDPOINT	VALUE	SPECIES	METHOD	SOURCE
oral	LD50	>5.000 mg/kg	rat		IUCLID

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitization

Shall not be classified as a respiratory or skin sensitizer.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.



Carcinogenicity

Shall not be classified as carcinogenic.

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

Symptoms related to the physical, chemical and toxicological characteristics

- If swallowed Data are not available.
- If in eyes
Data are not available.
- If inhaled
Inhalation of dust may cause irritation of the respiratory system
- If on skin
Data are not available.
- Other information none

Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of $\geq 0,1\%$.

Information on other hazards

There is no additional information.

12. Ecological information

Toxicity

Shall not be classified as hazardous to the aquatic environment.

Persistence and degradability

Data are not available.

Bio accumulative potential

Data are not available.

Mobility in soil

Data are not available.

Results of PBT and vPvB assessment

Data are not available.



Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of $\geq 0,1\%$.

Other adverse effects

Data are not available.

13. Transport information

Waste treatment methods

Consult the appropriate local waste disposal expert about waste disposal.

Sewage disposal-relevant information

Do not empty into drains.

Waste treatment of containers/packages

Handle contaminated packages in the same way as the substance itself. Completely emptied packages can be recycled.

Relevant provisions relating to waste

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions. Non-contaminated packages may be recycled.

14. Other information

UN number or ID number	not subject to transport regulations
UN proper shipping name	not assigned
Transport hazard class(es)	none
Packing group	not assigned
Environmental hazards	non-environmentally hazardous acc. to the dangerous goods regulations
Special precautions for user	There is no additional information.

Maritime transport in bulk according to IMO instruments the cargo is not intended to be carried in bulk.

Information for each of the UN Model Regulations

International Maritime Dangerous Goods Code (IMDG) - Additional information	Not subject to IMDG.
International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information	Not subject to ICAO-IATA.

15. Regulatory information

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

Relevant provisions of the European Union (EU)

Seveso Directive



2012/18/EU (Seveso III)

No.	Dangerous substance/ hazard categories	Qualifying quantity (tonnes) for the applica- tion of lower and up- per-tier requirements	Notes
	not assigned		

Deco-Paint Directive

VOC content 0 %

VOC content 0 g/l

Industrial Emissions Directive (IED)

VOC content 0 %

VOC content 0 g/l

Directive on the restriction of the use of certain hazardous substances in electrical and electronic equip- ment (RoHS)

not listed

Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

not listed

Water Framework Directive (WFD)

List of pollutants (WFD)

Name of sub- stance	Name acc. to inventory	CAS No	Listed in	Remarks
Bentonite	Metals and their compounds		a)	

Legend

a) Indicative list of the main pollutants

Regulation on the marketing and use of explosives precursors

not listed

Regulation on drug precursors

not listed

Regulation on substances that deplete the ozone layer (ODS)

not listed

Regulation concerning the export and import of hazardous chemicals (PIC)

not listed

Regulation on persistent organic pollutants (POP)

not listed

National regulations (GB)

List of substances subject to authorization (GB REACH, Annex 14) / SVHC - candidate list

not listed

Restrictions according to GB REACH, Annex 17

not listed



Other information

Directive 94/33/EC on the protection of young people at work. Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

National inventories

Country	Inventory	Status
AU	AIIC	substance is listed
CA	DSL	substance is listed
CN	IECSC	substance is listed
EU	ECSI	substance is listed
KR	KECI	substance is listed
MX	INSQ	substance is listed
NZ	NZIoC	substance is listed
PH	PICCS	substance is listed
TR	CICR	substance is listed
TW	TCSI	substance is listed
US	TSCA	substance is listed (ACTIVE)
VN	NCI	substance is listed

Legend

AIIC Australian Inventory of Industrial Chemicals
CICR Chemical Inventory and Control Regulation
DSL Domestic Substances List (DSL)
ECSI EC Substance Inventory (EINECS, ELINCS, NLP)

Legend

IECSC Inventory of Existing Chemical Substances Produced or Imported in China
INSQ National Inventory of Chemical Substances
KECI Korea Existing Chemicals Inventory
NCI National Chemical Inventory
NZIoC New Zealand Inventory of Chemicals
PICCS Philippine Inventory of Chemicals and Chemical Substances (PICCS)
TCSI Taiwan Chemical Substance Inventory
TSCA Toxic Substance Control Act



Chemical safety assessment

No Chemical Safety Assessment has been carried out for this substance.

15. Regulatory information (continued)

Indication of changes (revised safety data sheet)

Section	Former entry (text/value)	Actual entry (text/value)	Safety relevant
fvv	Classification according to Regulation (EC) No 1272/2008 (CLP): This substance does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.	Classification acc. to GHS: This substance does not meet the criteria for classification.	yes
2.3		Endocrine disrupting properties: Does not contain an endocrine disruptor (ED) at a concentration of $\geq 0,1\%$.	yes
14.8	Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN) - Additional information: Not subject to ADR, RID and ADN.		yes
15.1	Restrictions according to REACH, Annex XVII: not listed		yes
15.1	List of substances subject to authorization (REACH, Annex XIV)/SVHC - candidate list: Not listed.		yes
15.1	VOC content: 0 % / 0 g/l	VOC content: 0 %	yes
15.1		VOC content: 0 g/l	yes
15.1		National regulations(GB)	yes
15.1		List of substances subject to authorization (GB REACH, Annex 14) / SVHC - candidate list: not listed	yes
15.1		Restrictions according to GB REACH, Annex 17: not listed	yes
15.1		National inventories: change in the listing (table)	yes



Abbr.	Descriptions of used abbreviations
ADR	Accord relative au transport international des marchandises danger uses par route (Agreement concerning the International Carriage of Dangerous Goods by Road)
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
DGR	Dangerous Goods Regulations (see IATA/DGR)
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
ED	Endocrine disruptor
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
GB REACH	The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended)
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code
LD50	Lethal Dose 50%: the LD50 corresponds to the dose of a tested substance causing 50% lethality during a specified time interval
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
VOC	Volatile Organic Compounds
vPvB	Very Persistent and very Bioaccumulative

Key literature references and sources for data

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). Regulations concerning the International Carriage of Dangerous Goods by Rail (RID). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).



Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.

16. Other information

This Material Safety Data Sheet (MSDS) has been prepared in accordance with internationally recognized standards and is based on the best information available at the time of issue. It provides a summary of the health and safety hazards of the material and general guidance for its safe handling in the workplace. As the actual conditions of use are beyond our control, each user is responsible for assessing the risks associated with their specific application and implementing appropriate control measures.

END OF MSDS

