O58900 Bentonite

1. Identification of the Substance/Mixture and of the Company/Undertaking

1. 1. Product Identifier

Product Name:	*Bentonite*
Article No.:	*O58900*
UFI:	*--*

1. 2. Relevant identified Uses of the Substance or Mixture and Uses advised against

Identified uses:

Food and animal feed additive
Rheological modifier
Filler, binder, adsorption agent
Pharmaceutical production, cosmetic raw material
Fitration (e.g. oil, wine, beer)

Uses advised against:

1. 3. Details of the Supplier of the Safety Data Sheet (Producer/Importer)

Company:	*Interlabshop BV*
Address:	*Lage Brink 23, 7317BD Apeldoorn The Netherlands*
Tel./Fax.:	*+31(0)55-5215016*
Internet:	*www.labshop.nl*
EMail:	*labshop@labshop.nl*
Importer:	*--*

1. 4. Emergency No.

Emergency No.: *112 (24 hours a day)*

1. 4. 2 Poison Center:

2. Hazards Identification

2. 1. Classification of the Substance or Mixture

Classification according to Regulation (EC) No. 1272/2008 (CLP/GHS)

This product does not require classification and labelling as hazardous according to CLP/GHS.

Possible Environmental Effects:

2. 2. Label Elements

Classification according to Regulation (EC) No. 1272/2008 (CLP/GHS)

No classification required according to the CLP/GHS guidelines.

Hazard designation:

Not applicable.

Signal word:

Hazard designation:

Safety designation:

Hazardous components for labelling:

2. 3. Other Hazards

Depending on the handling and application (grinding, drying, packing), inhalable dust may be generated.
The dust contains airborne quartz dust.
Prolonged and/or massive inhalation of airborne quartz dust may cause lung fibrosis, commonly referred to as silicosis. The symptoms of silicosis are cough and breathlessness.

3. Composition/Information on Ingredients

3. 1. Substance

3. 2. Mixture

Chemical Characterization: *CAS No. 1302-78-9, EINECS 215-108-5*
Synonyms: Sodium bentonite, Calcium bentonite

Information on Components / Hazardous Ingredients:

Additional information:

Exempted from the mandatory REACH Registration (Annex V No. 7)
This product contains less than 1% of respirable silica, and is therefore not classified as harmful.
Bentonite is a UVCB substance, Sub-Type 4. The purity of the product is 100 %.

4. First Aid Measures

4. 1. Description of the First Aid Measures

General information:

Seek medical attention in case of complaints.

After inhalation:

Take affected person to fresh air.
Seek medical advice immediately.

After skin contact:

Wash with soap and rinse with plenty of water.

After eye contact:

Rinse open eyes with plenty of water. In case of discomfort seek medical help.

After ingestion:

Rinse mouth with water and drink plenty of water.

4. 2. Most important Symptoms and Effects, both Acute and Delayed

Symptoms:

None known.

Effects:

4. 3. Indication of any Immediate Medical Attention and special Treatment needed

Treatment:

Treat symptomatically.

5. Fire-Fighting Measures

5. 1. Extinguishing Media

Suitable extinguishing media:

Product itself does not burn.
Use extinguishing media for surrounding fire.
Foam, carbon dioxide (CO2), extinguishing powder, water spray jet.

Unsuitable extinguishing media:

5. 2. Special Hazards arising from the Substance or Mixture

Special hazards:

The product is not flammable.
The product is not combustible and does not support the combustion.
No special hazards.

5. 3. Advice for Firefighters

Protective equipment:

Wear self-contained respiratory protective device.

Further information:

6. Accidential Release Measures

6. 1. Personal Precautions, Protective Equipment and Emergency Procedures

Personal precautions:

Ensure adequate ventilation.
Avoid inhalation of dust.
Avoid contact with skin, eyes and clothing.
Together with water product causes slippery surfaces.

6. 2. Environmental Precautions

Environmental precautions:

No special measures required.

6. 3. Methods and Material for Containment and Cleaning Up

Methods and material:

Sweep up, then place into a suitable container for disposal. Avoid generating dust.
If the product is spilled on the road, put up warning signs and take up spilled material with a vacuum cleaner.

6. 4. Reference to other Sections

Protective clothing, see Section 8.
Dispose of contaminated material according to Section 13.

7. Handling and Storage

7. 1. Precautions for Safe Handling

Instructions on safe handling:

Provide adequate ventilation.
Wear adequate protective clothing (see para. 8).

Hygienic measures:

Wash hands before breaks and after work.

7. 2. Conditions for Safe Storage, including any Incompatibilities

Storage conditions:

Store in tightly sealed containers in a dry room.

Requirements for storage areas and containers:

Open and handle container with care.
Reduce the formation of fine dust and protect from wind during loading and unloading.

Information on fire and explosion protection:

No special measures necessary.

Storage class:

13; Non combustible solids (TRGS 510)

Further Information:

7. 3. Specific End Use(s)

Further information:

No information available.

8. Exposure Controls/Personal Protection

8. 1. Parameters to be Controlled

Parameters to be controlled (DE):

No occupational exposure limits known.

Parameters to be controlled:

Derived No-Effect Level (DNEL):

Predicted No-Effect Concentration (PNEC):

Additional Information:

8. 2. Exposure Controls

Technical protective measures:

Provide adequate ventilation/exhaust system.
Facilities storing or utilizing this material should be equipped with an eyewash and shower facility.

Personal Protection

General protective measures:

Do not inhale dust. Do not eat, drink or smoke while working. Wash hands before breaks and at the end of work.

Respiratory protection:

Dust mask (with particle filter) recommended when very dusty.

Hand protection:

Protective gloves (EN 374)

Protective glove material:

Eye protection:

Safety glasses (EN 166)
Do not wear contact lenses.

Body protection:

Protective suit with long sleeves.

Environmental precautions:

No special measures required.

9. Physical and Chemical Properties

9. 1. Information on Basic Physical and Chemical Properties

Form:	*powder*
Color:	*beige*
Odor:	*odorless*
Odor threshold:	*no information available*
pH-Value:	*6 - 11 (20°C)*
Melting temperature:	*> 450°C (EU A.1)*
Boiling temperature:	*not applicable*
Flash point:	*not applicable*
Evaporation rate:	*not applicable*
Flammability (solid, gas):	*not flammable*
Upper explosion limit:	*no information available*
Lower explosion limit:	*no information available*
Vapor pressure:	*not applicable*
Vapor density:	*No information available.*
Density:	*2.6 g/cm3*
Solubility in water:	*< 0.9 g/l (20°C)*
Coefficient of variation (n-Octanol/Water):	*not applicable*
Auto-ignition temperature:	*not applicable*
Decomposition temperature:	*No decomposition if used according to specifications*

Viscosity, dynamic:

not applicable

Explosive properties:

not explosive

Oxidizing properties:

No oxidizing properties

Bulk density: *500 - 1100 kg/m3*

9. 2. Further Information

Solubility in solvents:

Viscosity, kinematic:

Burning class:

Solvent content:

Solid content:

Particle size:

Other information:

Self-ignition: no relative self-ignition temperature below 400°C (92/69/EEC, A.6)

10. Stability and Reactivity

10.1. Reactivity

The product is stable.

10.2. Chemical Stability

The product is chemically stable.

10.3. Possibility of Hazardous Reactions

Unknown.

10.4. Conditions to Avoid

Conditions to avoid:

Avoid contact with water: causes slippery surfaces.

Thermal decomposition:

10.5. Imcompatible Materials

Inert, non-reactive.

10.6. Hazardous Decomposition Products

None

10.7. Further Information

11. Toxicological Information

11. 1. Information on Toxicological Effects

Acute Toxicity

LD50, oral: *> 5000 mg/kg (rat; US EPA)*

LD50, dermal:

No information available.

LC50, inhalation:

No information available.

Primary effects

Irritant effect on skin:

Non irritating (rabbit; OECD 404)

Irritant effect on eyes:

Non-irritating to eyes (rabbit; OECD 405)

Inhalation:

No information available.

Ingestion:

No information available

Sensitization:

No sensitizing effects known.

Mutagenicity:

In vitro Bacterial Reverse Mutation Test (OECD 471): negative
In vitro Mammalian Chromosomal Aberration Test (OECD 473): negative
In vitro Mammalian Cell Gene Mutation Test (OECD 476): negative

Reproductive toxicity:

No information available.

Carcinogenicity:

No relevant data found.

Teratogenicity:

No information available.

Specific target organ toxicity (STOT):

Single exposure: no organospecific toxicity expected.
Repeated exposure: no organospecific toxicity expected.

Additional toxicological information:

Aspiration hazard: not applicable
Endocrine Disrupting Properties:
This substance/mixture does not contain any components with endocrine disrupting properties in a percentage of 0.1 or greater, according to Article 57(f) of the REACH Regulation (EC) No. 1907/2006 or the Delegated Regulation (EC) 2017/2100 or the Delegated Regulaton (EC) 2018/605.
This product contains quartz (crystalline silicate).
Frequent or repeated inhalation of airborne quartz powder (crystalline silicate) can cause silicosis.
The IARC (International Agency for Research on Cancer) notes that cystalline SiO2 which is inhaled at the working place can cause pulmonary cancer.
However, they further note that it does not apply for all working places and not all types of crystalline SiO2 (IARC-Monographs, 1997, Vol. 68).
"Silica, some silicates, coal dust and para-aramid fibrils", IARC

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monograph on the evaluation of carcinogenic risk to humans, Volume 68, 1997, pp. 41-242

The dust level should be measured and controlled continuously.

Although bentonite contains quartz, an intratracheal study (Creutzenberg 2008) showed significant toxicity differences between bentonite (15.2 mg bentonite with 60 % quartz content) and reference quartz (10.5 mg of 87% quartz) after giving comparable dosages of quartz.

The reference quartz caused a significant pulmonary toxicity, whereas bentonite showed a significantly lower toxicity. The main effect of bentonite was a lower fibrosis and inflammation of the lung. The study thus showed that the toxicity data found for quartz cannot be directly made for bentonite.

12. Ecological Information

12. 1. Aquatic Toxicity

Fish toxicity:

LC50: 16 mg/l (96h, Oncorhynchus mykiss)

LC50: 2.8 - 3.2 g/l (24h, sea fish)

Daphnia toxicity:

EC50: > 100 mg/l (48h, Daphnia magna; OECD 202)

EC50: 81.6 mg/l (96h, Metacarcinus magister)

EC50: 24.8 mg/l (96h, Pandalus danae)

Bacteria toxicity:

84.4 mg/kg (Phaseolus vulgaris; Zeo mays)

Algae toxicity:

EC50: > 100 mg/l (72h, Scenedesmus subspicatus)

12. 2. Persistency and Degradability

Methods for the evaluation of the biological degradability are not applicable for inorganic substances.

12. 3. Bioaccumulation

No bioaccumulation expected.

12. 4. Mobility

Weak solubility and mobility.

12. 5. Results of PBT- und vPvP Assessment

This substance is not classified as PBT (persistent, bioaccumulative, toxic), nor as vPvB (very persistent, very bioaccumulative).

12. 6. Other Adverse Effects

Water hazard class:

Not hazardous.

Behaviour in sewage systems:

Further ecological effects:

Endocrine Disrupting Properties:

This substance/mixture does not contain any components with endocrine disrupting properties in a percentage of 0.1 or greater, according to Article 57(f) of the REACH Regulation (EC) No.

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1907/2006 or the Delegated Regulation (EC) 2017/2100 or the Delegated Regulaton (EC) 2018/605.

AOX Value:

13. Disposal Considerations

13. 1. Waste Treatment Methods

Product:

If possible reuse product.

European Waste Code (EWC):

Uncleaned packaging:

Non-contaminated packaging may be recycled.

Waste Code No.:

14. Transport Information

14. 1. UN Number

ADR, IMDG, IATA

14. 2. UN Proper Shipping Name

ADR/RID:

No hazardous goods according to ADR / DOT (US) (land transportation).

IMDG/IATA:

Not hazardous goods

14. 3. Transport Hazard Classes

ADR Class:

not applicable

Hazard no.:

Classification code:

Tunnel restriction code:

IMDG Class (sea):

not applicable

Hazard no.:

EmS No.:

IATA Class:

not applicable

Hazard no.:

14. 4. Packaging Group

ADR/RID:

not applicable

IMDG:

IATA:

14. 5. Environmental Hazards

Not classified as environmentally hazardous.

14. 6. Special Precautions for User

Not classified as a dangerous good under transport regulations.

14. 7. Transportation in Bulk according to Annex II of MARPOL 73/78 and IBC-Code

not applicable

14. 8. Further Information

15. Regulatory Information

15. 1. Safety, Health and Environmental Regulations/Legislation specific for the Substance or Mixture

Water hazard class:

0, not hazardous (according to the German Regulation AwSV)

Local regulations on chemical accidents:

Seveso III: does not apply

Employment restrictions:

Restriction and prohibition of application:

EC. REACH, Section XVII, Restrictions on the Manufacture, Placing on the Market and Use of Certain Dangerous Substances, Preparations and Articles: not applicable

Technical instructions on air quality:

15. 2. Chemical Safety Assessment

A risk assessment has been carried out under the patronage of the European Bentonite Association (EUBA), with the conclusion that bentonite is not a hazardous material.

15. 3. Further Information

EC. REACH, Annex XIV, Candidate List of Substances of very High Concern (SVHC): not regulated / not applicable

Regulation (EC) 1005/2009 - Substances that Deplete the Ozone Layer: not regulated / not applicable

Regulation (EU) 2019/1021 - Persistent organic pollutants: not regulated / not applicable

The product is not classified as carcinogenic to man by the OSHA, the International Agency for Research on Cancer (IARC) or the National Toxicology Program (NTP).

Listed in the following inventories:

EINECS (215-108-5), TSCA, AICS (AUS), DSL (CA), ENCS/ISHL (JP), KECI (KR), PICCS (PH), IECSC (CN), NZIoC (NZ), TCSI (TW)

16. Other Information

This product should be stored, handled and used in accordance with good hygiene practices and in conformity with any legal regulations. This information contained herein is based on the present state of knowledge and is intended to describe our product from the point of view of safety requirements. It should be therefore not be construed as guaranteeing specific properties.