Safety data sheet

based on 1907/2006/EC, Article 31

Because Chemistry Matters.

Printing date 08.03.2023 **Version number 6 (replaces version 5)** **Revision: 08.03.2023**

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

1.1 Product identifier

Trade name: ***KÖSTROLITH® NaMSXP-TR,***
KÖSTROLITH® 13XP-TR,
KÖSTROLITH® LiLSXP-TR,
KÖSTROLITH® CaLSXP-TR,
KÖSTROLITH® NaYP-TR,
KÖSTROLITH® NaYP M-TR

MSDS №: MS009000
CAS Number:
1318-02-1 zeolite (crystalline aluminosilicate)
zeolite, cuboidal, crystalline, synthetic, non-fibrous
Registration number 01-2119429034-49-xxxx

1.2 Relevant identified uses of the substance or mixture and uses advised against None.
Sector of Use
SU0 Other
SU1 Agriculture, forestry, fishery
SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
SU5 Manufacture of textiles, leather, fur
SU6b Manufacture of pulp, paper and paper products
SU8 Manufacture of bulk, large scale chemicals (including petroleum products)
SU9 Manufacture of fine chemicals
SU10 Formulation [mixing] of preparations and/or re-packaging (excluding alloys)
SU11 Manufacture of rubber products
SU12 Manufacture of plastics products, including compounding and conversion
SU16 Manufacture of computer, electronic and optical products, electrical equipment
SU17 General manufacturing, e.g. machinery, equipment, vehicles, other transport equipment
SU18 Manufacture of furniture
SU19 Building and construction work
SU20 Health services
SU21 Consumer uses: Private households / general public / consumers
SU23 Electricity, steam, gas water supply and sewage treatment

Application of the substance / the mixture
PC2 Adsorbents
PC19 Intermediate

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:
Chemiewerk Bad Köstritz GmbH
Heinrichshall 2
D-07586 Bad Köstritz
Germany
Phone: +49 (0) 36605 810 (Mo-Fr: 7 am - 4 pm)
Fax: +49 (0) 36605 2345
Email: msds@cwk-bk.de

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 The substance is not classified, according to the CLP regulation.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 Void
Hazard pictograms Void
Signal word Void

Hazard statements Void
Additional information:
Do not breathe dust.
Repeated exposure may cause skin dryness or cracking.

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KÖSTROLITH® NaYP M-TR

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2.3 Other hazards

Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

*
SECTION 3: Composition/information on ingredients

3.1 Substances

CAS No. Description
1318-02-1 Zeolite, silica and sodium and titanium based, crystalline, synthetic, non fibrous
Additional information:
zeolite NaMSX (FAU): $Na_2O \cdot Al_2O_3 \cdot 2{,}35\ SiO_2 \cdot n\ H_2O$
or
zeolite 13X (FAU): $Na_2O \cdot Al_2O_3 \cdot 2{,}5\ SiO_2 \cdot n\ H_2O$
or
zeolite NaY (FAU): $Na_2O \cdot Al_2O_3 \cdot x\ SiO_2 \cdot n\ H_2O$; $x > 5$

SECTION 4: First aid measures

4.1 Description of first aid measures

General information: No special measures required.
After inhalation: Supply fresh air; consult doctor in case of complaints.
After skin contact:
Rinse with warm water.
After each cleaning use treatment creams, for very dry skin greasy ointments.
After eye contact: Rinse opened eye for several minutes under running water.
After swallowing: If symptoms persist consult doctor.

4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents: Use fire extinguishing methods suitable to surrounding conditions.

5.2 Special hazards arising from the substance or mixture No further relevant information available.

5.3 Advice for firefighters

Protective equipment: No special measures required.
Additional information Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures Wear protective clothing.

6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.

6.3 Methods and material for containment and cleaning up:
Avoid formation of dust.
Pick up mechanically.

6.4 Reference to other sections
No dangerous substances are released.
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

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SECTION 7: Handling and storage

7.1 Precautions for safe handling
Prevent formation of dust.
Provide suction extractors if dust is formed.
Any unavoidable deposit of dust must be regularly removed.
Protect against electrostatic charges.

Information about fire - and explosion protection: The product is not flammable.

7.2 Conditions for safe storage, including any incompatibilities

Storage:
Requirements to be met by storerooms and receptacles: Store only in the original receptacle.
Information about storage in one common storage facility:
Store away from foodstuffs.
Do not store together with acids.
Further information about storage conditions: None.
Storage class: 13

7.3 Specific end use(s) No further relevant information available.

*
SECTION 8: Exposure controls/personal protection

8.1 Control parameters
1318-02-1 zeolite (crystalline aluminosilicate)
zeolite, cuboidal, crystalline, synthetic, non-fibrous

Ingredients with limit values that require monitoring at the workplace: Not required.

DNELs

Oral	DNEL/DMEL	1.25-1.5 mg / kg / d Consumer exposure: Long-term - systemic effects (repeated dose toxicity)
Dermal	DNEL/DMEL	1.25-1.5 mg / kg / d
Inhalative	DNEL/DMEL	2.5-3 mg / m³ / d
	DNEL/DMEL	0.0033 mg / m³ Consumer exposure: Long-term - systemic effects (repeated dose toxicity)
	DNEL/DMEL	3 mg / m³ Worker exposure: long-term – local effects (OEL)

PNECs

PNEC aqua - freshwater	3.2 mg/L (Daphnia magna)
PNEC aqua - marine water	0.32 mg/L (Daphnia magna)
PNEC aqua - intermittent releases	>1 mg/L (Daphnia magna)
PNEC soil	600 mg/kg. w. (Raphanus sativus) long-term toxicity test

8.2 Exposure controls
Appropriate engineering controls No further data; see item 7.

Individual protection measures, such as personal protective equipment
General protective and hygienic measures: The usual precautionary measures are to be adhered to when handling chemicals.
Respiratory protection:
In the case of generation of fine dust use of dust filter
Filter P2
Use suitable respiratory protective device in case of insufficient ventilation.
Hand protection
Wear gloves for the protection against mechanical hazards according to EN 388.
Check protective gloves prior to each use for their proper condition.
Use gloves of stable material (e.g. Nitrile) - if necessary tricoted to improve the wearability.

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Preventive skin protection by use of skin-protecting agents is recommended.
After each cleaning use treatment creams, for very dry skin greasy ointments.

Material of gloves

Wear gloves for the protection against mechanical hazards according to EN 388.
Butyl rubber, BR
Nitrile rubber, NBR
Recommended thickness of the material: ≥ 0.2 mm
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

For the permanent contact in work areas without heightened risk of injury (e.g. Laboratory) gloves made of the following material are suitable:

Butyl rubber, BR
Nitrile rubber, NBR

Not suitable are gloves made of the following materials:

Strong material gloves
Leather gloves

Eye/face protection Safety glasses
Body protection: Protective work clothing

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Colour:	White
Odour:	Odourless
Odour threshold:	Not applicable.
Boiling point or initial boiling point and boiling range	Undetermined.
Flammability	Product is not flammable.
Lower and upper explosion limit	
Lower:	Not applicable.
Upper:	Not applicable.
Flash point:	Not applicable.
Decomposition temperature:	> 600 °C
pH (50 g/l) at 20 °C	7-11
Viscosity:	
Kinematic viscosity	Not applicable.
Dynamic:	Not applicable.
Solubility	
water:	Not determined.
Partition coefficient n-octanol/water (log value)	Not determined.
Vapour pressure:	Not applicable.
Density and/or relative density	
Density at 20 °C:	2.1 g/cm³
Relative density	Not determined.
Bulk density at 20 °C:	400 kg/m³
Vapour density	Not applicable.
Particle characteristics	See item 3.

9.2 Other information

Appearance:

Form:	Crystalline powder
Important information on protection of health and environment, and on safety.	
Auto-ignition temperature:	Not applicable.
Explosive properties:	Product does not present an explosion hazard.
Change in condition	
Evaporation rate	Not applicable.

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Information with regard to physical hazard classes

Explosives	Void
Flammable gases	Void
Aerosols	Void
Oxidising gases	Void
Gases under pressure	Void
Flammable liquids	Void
Flammable solids	Void
Self-reactive substances and mixtures	Void
Pyrophoric liquids	Void
Pyrophoric solids	Void
Self-heating substances and mixtures	Void
Substances and mixtures, which emit flammable gases in contact with water	Void
Oxidising liquids	Void
Oxidising solids	Void
Organic peroxides	Void
Corrosive to metals	Void
Desensitised explosives	Void

SECTION 10: Stability and reactivity

10.1 Reactivity No further relevant information available.

10.2 Chemical stability
No decomposition if used and stored according to specifications.
Decomposition with acids
Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

10.3 Possibility of hazardous reactions No dangerous reactions known.

10.4 Conditions to avoid No further relevant information available.

10.5 Incompatible materials: No further relevant information available.

10.6 Hazardous decomposition products: No dangerous decomposition products known.

*
SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008
1318-02-1 zeolite (crystalline aluminosilicate)
zeolite, cuboidal, crystalline, synthetic, non-fibrous

Acute toxicity Based on available data, the classification criteria are not met.

LD/LC50 values relevant for classification:

Oral	LD50	>5,110 mg/kg (rat) (OECD TG 401)
Dermal	LD50	>2,000 mg/kg (rabbit) (OECD TG 402)

Inhalative LC50/4 h >3,350 mg/m³ (rat) (IUCLID Dataset 18-Feb-2000)

Skin corrosion/irritation
Irritation of skin IS 0 (rabbit) (OECD TG 404)

Serious eye damage/irritation
Irritation of eyes IS 0.7-1.3 (rabbit) (OECD 405)
Corneal opacity

Respiratory or skin sensitisation
Buehler Test, guinea pig: No sensitiziation observed, OECD 406 (zeolite)

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Oral CHO >0.5 mg/kg bw (rat) (OECD TG 474)
no genotoxic effects

CHO 0.067 mg/l (Chinese Hamster Ovary) (OECD TG 473)
cytotoxic 0.0671-0.725 mg/l without metabolic activation;
0.313-0.4 with metabolic activation

Mouse Lymphoma Test >0.08 mg/ml (L5178Y) (OECD TG 476)
no genotoxicity;
cytotoxicity > 0.02 mg/ml (without metabolic activation);
>0.08 with metabolic activation

Germ cell mutagenicity Based on available data, the classification criteria are not met.
Carcinogenicity Based on available data, the classification criteria are not met.
Reproductive toxicity Based on available data, the classification criteria are not met.
STOT-single exposure Based on available data, the classification criteria are not met.
STOT-repeated exposure Based on available data, the classification criteria are not met.
Aspiration hazard Based on available data, the classification criteria are not met.

Subacute to chronic toxicity:

Oral NOEL / (90 d) 5,000 ppm (rat)

Inhalative Lung effects / (11 weeks) (rat)

Lung effects, inflammation No negative effects were determined during test for carcinogenity and teratogenicity

Additional toxicological information:

Sensitisation No sensitizing effect known.

Repeated dose toxicity

Oral NOAEL (90 d) 250-300 mg/kg (rat)
subchronic oral repeated dose

Oral AMES Test >0.1 mg/plate (Salmonella typhimurium) (OECD TG 471)
No effect with and without metabolic activation

11.2 Information on other hazards

Endocrine disrupting properties Substance is not listed.

*
SECTION 12: Ecological information

12.1 Toxicity

1318-02-1 zeolite (crystalline aluminosilicate)
zeolite, cuboidal, crystalline, synthetic, non-fibrous

Subsequent information refers to the deliver goods not to used goods.

Aquatic toxicity:

The product behaves under normal conditions environmental neutral.

LC50/ (96 h) >680 mg / L (Pimephales promelas) (EPA 660/3-75/009)

EC50 / (24 h) 2,808 mg/L (Daphnia magna) (OECD TG 202)

EC50 / (96 h) >328 mg / L (scenedesmus subspicatus) (OECD TG 201)

EC50 / (16 h) 950 mg / L (pseudomonas putida) (DIN 38412/8)

12.2 Persistence and degradability

Anorganic product, is not eliminable from water by means of biological cleaning processes.
The only known route of degratation far is a slow hydrolysis, especially in acid.

12.3 Bioaccumulative potential No further relevant information available.

12.4 Mobility in soil No further relevant information available.

12.5 Results of PBT and vPvB assessment

PBT: Not applicable.
vPvB: Not applicable.

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12.6 Endocrine disrupting properties For information on endocrine disrupting properties see section 11.

12.7 Other adverse effects
Remark: Based on the capability of KÖSTROLITH molecular sieves to ion exchange heavy metals may be trapped.

Additional ecological information:
General notes:
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Recommendation Subsequent information refers to the deliver goods not to used goods.

Waste disposal key:
The disposal of the product has to be carried out in accordance with the legal requirements. EWC waste codes are strictly industry-oriented, therefore waste classification has to be done by the waste producer.

European waste catalogue

06 08 99 wastes not otherwise specified

Uncleaned packaging:
Recommendation: Disposal must be made according to official regulations.

*

SECTION 14: Transport information

14.1 UN number or ID number

ADR, IMDG, IATA	Void Not applicable.
ADN	Void

14.2 UN proper shipping name

ADR, ADN	Void
IMDG, IATA	Not applicable.

14.3 Transport hazard class(es)

ADR, IMDG, IATA	Not applicable.
Class	Void
ADN/R Class:	Void

14.4 Packing group

ADR, IMDG, IATA	Void Not applicable.

14.5 Environmental hazards:

Marine pollutant:	No

14.6 Special precautions for user Not applicable.

14.7 Maritime transport in bulk according to IMO instruments Not applicable.

Transport/Additional information:	Not dangerous according to the above specifications.
UN "Model Regulation":	Void

*

SECTION 15: Regulatory information

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

Labelling according to Regulation (EC) No 1272/2008 Void
Hazard pictograms Void
Signal word Void

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Hazard statements Void

Directive 2012/18/EU
Named dangerous substances - ANNEX I Substance is not listed.

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Department issuing SDS:
Abteilung Produktsicherheit
MS-F
Contact: Philipp Brandt
Date of previous version: 08.03.2023
Version number of previous version: 5

Abbreviations and acronyms:
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
**** Data compared to the previous version altered.***