Trade name:	Tribomechanically activated ZEOLITE CLINOPTILOLITE
Date of compilation:	12.09.2015.

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

1.1.	Product identifier	
	Substance name:	natural zeolite, clinoptilolite of sedimentary origin (1g568)
	EC No:	215 – 283 – 8 / 930 -915 – 0 / 930 – 993 - 4
	Synonyms:	clinoptilolite
	CAS No:	1318 – 02 – 1 (natural zeolite)
	CAS No:	12173 – 10 -3 (clinoptilolite)
1.2.	Relevant identified uses of the substance or mixture and uses advised against	
	Uses:	Zeolite clinoptilolite serves as an absorbent, anticaking agent, bulking agent and deodorant. Can be used as an auxiliary soil substance for improvement of physical - chemical properties of soils; as an sorbent of aggressive substances from waste water and exhalations; as an universal sorbent of odours and moisture intended for use in the household; as a carrier of effective substances, for example: pesticides; as a sorptive and hydratation component used in the litter under animals; as a sand intended for wintry storage of vegetables; as an effective deodorant and sorbent of moisture intended for use in the storage premises and refrigerators; as a filter medium into the aquarium; as an ecological spreading material; as a decorating material for use in the flowerpots and small fountains; as a filling (aggregates) in manufacturing the building units; as a cosmetic substance etc.
1.3.	Details of the supplier of the safety data sheet	
	Supplier:	MINERAL PROMET d.o.o.
	Address:	Juraja Habdelića 32a
	Telephone number:	00385 1 6222 031
	Telefax:	00385 1 6222 031
	e-mail of competent person:	mineralpromet@gmail.com
1.4.	Emergency telephone number	
	National Protection and Rescue Directorate:	112
	Medical information:	Institute for Medical Research and Occupational Health (IMROH) Poison Control Centre Ksaverska cesta 2, 10000 Zagreb

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		(+385 1) 23-48-342

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

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

Hazard class and category code, hazard statement:

This product is produced from natural zeolite of clinoptilolite type.

Clinoptilolite (hydrated sodium calcium aluminosilicate) of sedimentary origin ≥ 80% and clay minerals ≤ 20% (free of fiber and quartz).

It is substance which occurs in nature. It is a substance according to Annex V Regulation (EC) No. 1907/2006 of the European Parliament and of the Council (exemptions from the obligation to register in accordance with article 2(7)(b)).

This substance is not stated in Schedule No. I of Directive No. 67/548/EHS in DSD (Dangerous Substance Directive) and it has not the prescribed classification in compliance with this Directive.

This substance is not stated in Table 3.1. of Schedule

No. VI of Directive ES No. 1272/2008 on classification, labelling and packing of substances and mixtures, and on alliteration, amendment and cancellation of Directives No. 67/548/EHS and No. 1999/45/ES and on alliteration and amendment of Directive (ES) No. 1907/2006 and it has not any prescribed ''harmonized'' classification in compliance with this Directive.

2.1.2. Additional information

Zeolites are crystalline aluminosilicates, composed of silica (SiO_2) and alumina (Al_2O_3), in various proportions plus metallic oxides. Produced by hydrothermal treatment of a solid aluminosilicate or of a gel obtained by the reaction of sodium hydroxide, alumina hydrate and sodium silicate. The initially obtained product, or a naturally occurring analog, may be partially ion-exchanged to introduce other cations. Specific zeolites are identified by notations indicating crystal structure and predominant cation, e.g. KA, CaX, NaY

2.2. Label elements

	Product identification:	Natural zeolite, clinoptilolite of sedimentary origin
	According to Directive No. 67/548/EHS DSD	**ES CLASSIFICATION:** This substance has not any prescribed classification according to Directive No. 67/548/EHS DSD

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		Based on his own decision, the raw material's manufacturer labelled the substance in the following way, as follows: **Warning dangerous symbols**: it is not given **R-sentences**: it is not given **S-sentences**: S2 keep it out of range of children. S25 Avoid contact with eyes.
	According to Directive (ES) No. 1272/2008	**GHS CLASSIFICATION:** This substance has not the prescribed classification according to Directive (ES) No. 1272/2008 Based on his own decision, the raw material's manufacturer labelled this substance as follows: **GSH pictograms**: it is not given **warning word**: it is not given **warning notice**: it is not given **safety notice - prevention**: P102: Keep it out of range of children. **safety notice - response**: it is not given **safety notice - storage**: it is not given **safety notice - disposal**: it is not given

SECTION 3. Composition/ Information on ingredients

CAS No	EC No	Name	Weight % content (or range)
1318 – 02 – 1 12173 – 10 -3	215 – 283 – 8 930 -915 – 0 930 – 993 - 4	natural zeolite clinoptilolite	100 %

SECTION 4. First aid measures

4.1.	Description of first aid measures	
	General notes:	If any ailments are manifest, or in case of any doubts, a doctor should be informed about it and information, as per this Safety Data Sheet, should be provided with him.
	Following inhalation:	Fresh air and take medical advice.
	Following eye contact:	Wash the eyes with huge amount of water during several minutes and take medical advice.

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4.2.	Most important symptoms and effects, both acute and delayed	
	Following inhalation:	It is not specified.
	Following skin contact:	It does not represent any risk after repeated skin applications and it is not absorbed by skin in the harmful quantity.
	Following eye contact:	It irritates very mildly and short-lasting the conjunctiva mucosa.
	Following ingestion:	It is not specified.

SECTION 5. Firefighting measures		
5.1.	Extinguishing media	
	Suitable extinguishing media:	Material is not inflammable. Shall be necessary to be adapted to the substances stored in their close proximity.
5.2.	Special hazards arising from the substance or mixture	
	Hazardous combustion products:	It is not specified.
5.3.	Advice for firefighters	
	It is not specified.	

SECTION 6. Accidental release measures		
6.1.	Personal precautions, protective equipment and emergency procedures	
6.1.1.	For non-emergency personnel	
	Protective equipment:	Use the personal protective means and to not breath in the dust when handling larger quantities.
6.1.2.	For emergency responders:	
	Use the personal protective means and to not breath in the dust when handling larger quantities.	
6.2.	Environmental precautions:	
	Environmental precautions: before its adsorption, the pure Zeolite (without any other mixtures) can be worked into the soil, because Zeolite is the registered soil auxiliary substance. Zeolite does not contaminate even water - it can be also discharged into to sewerage (Zeolite is used as an adsorbent for treatment of drinking water and also for clarification of waste water). Zeolite is not a dangerous waste!	
6.3.	Methods and material for containment and cleaning up	
	Mechanically, residues of Zeolite (without any other additives) can be worked into the soil (Zeolite is the certified soil auxiliary substance), or discharged into the sewerage. After it's through emptying, the used packs from this preparation should be handed over into the separated collection (plastic or paper), or to the approved refuse incinerating plant.	

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SECTION 7. Handling and storage

7.1. Precautions for safe handling

From the view of safety and health protection in working, the employees must use the personal protective means during manufacturing of this preparation.

The working environment, during manufacturing of this preparation and handling with thereof, must be ensured in such a way so that the NPEL of dust has not been exceeded in the air.

The employees must be instructed about product, and they must follow the principles of health and environment protection.

7.2. Conditions for safe storage, including any incompatibilities

This product must be stored in the original and undamaged and closed packs, and in dry, hygienically clean, and in good ventilated and covered warehouses, and separately from foodstuffs. In case of packing for small customers, it should be also stored separately from medicaments and disinfecting agents.

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Substance	CAS No	Occupational exposure limit values/short term values		Biological limit values
		ppm	mg/m^3	
natural zeolite clinoptilolite	1318 – 02 – 1 12173 – 10 -3	It is not given	It is not given	It is not given

Substance:	natural zeolite clinoptilolite		
EC No:	215 – 283 – 8 / 930 - 915 – 0 / 930 – 993 - 4	CAS No:	1318 – 02 – 1 12173 – 10 -3

8.2. Personal protection:

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	In the form of dust (aero-dispersal system) in the working environment, it is necessary to assess Zeolite as a substance with predominantly fibrous effect (respiration limit 5 µm). NPEL of dust for the working environment is 5 $mg.m^{-3}$ of air. The workplaces shall be dust exhausted, or ventilated; in such a way so that the maximum dust concentration is 5 $mg.m^{-3}$ of air. Where it is not possible to provide temporarily these conditions, the personal protective working means (protective clothing and shoes, respirator with dust separator, protective).
8.3.	Environmental exposure controls
	Environmental precautions: before its adsorption, the pure Zeolite (without any other mixtures) can be worked into the soil, because Zeolite is the registered soil auxiliary substance. Zeolite does not contaminate even water - it can be also discharged into to sewerage (Zeolite is used as an adsorbent for treatment of drinking water and also for clarification of waste water). Zeolite is not a dangerous waste!

SECTION 9. Physical and chemical properties

	Physical state:	solid
	Colour:	light greyish green
	Odour:	no aroma nor malodour
	pH:	no information at disposal
	Melting point / freezing point:	1340 C°/no information at disposal
	Flash point:	up to 600 C° neg.
	Evaporation rate:	no information at disposal
	Explosive limits (volume % in the air):	non-explosive
	Vapour pressure:	no information at disposal
	Vapour density:	no information at disposal
	Relative density	no information at disposal
	Bulk density:	no information at disposal
	Solubility(ies):	insoluble
	Specific weight (kg/m3):	2200 - 2440
	Auto-ignition temperature:	no information at disposal
	Decomposition temperature:	no information at disposal
	Viscosity:	no information at disposal
	Explosive properties:	non-explosive
	Oxidising properties:	no information at disposal

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SECTION 10.: Stability and reactivity		
10.1.	Reactivity:	stable under normal conditions of use
10.2.	Chemical stability:	no information at disposal
10.3.	Possibility of hazardous reactions:	no information at disposal
10.4.	Conditions to avoid:	no information at disposal
10.5.	Materials to avoid:	strong Oxidizing Agents, such as fluorine, chlorine trifluoride, and oxygen difluoride
10.6.	Hazardous decomposition products:	none

SECTION 11. Toxicological information	
11.1.	Information on toxicological effects: no information at disposal
	Acute toxicity:
LD50	It was not possible to determine the value of acute oral LD50. After application of dose 20.000 mg/kg, no animal has dies. It is not possible to apply higher doses. It was not possible to determine the value of acute dermal LD50. After application of dose of 5.000 mg/kg on the cut back skin of experimental animals, no animal has died. It is not possible to apply higher doses.
Eye irritability:	It irritates very mildly and short-lasting the conjunctiva mucosa. /Apart from the mild congestion after two (2) hours after application of the preparation, which has disappeared within 24 hours, no inflammation changes of conjunctiva mucosa have been observed here./
Skin irritation:	Zeolite does not cause any inflammation changes on the intact or damaged skin, as well as any other indication of toxicity, even after multiple applications thereof.
Influence on live organisms:	Zeolite can be classified as a substance, which is low toxic up to harmless substance. It does not represent any risk even after repeated skin applications, and it is not absorbed by the skin in the harmful quantity. It irritates very mildly and short-lasting the conjunctiva mucosa.
11.2.	CMR effects (carcinogenicity; mutagenicity; reproductive toxicity)
	Carcinogenicity: no information at disposal

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	Mutagenicity *in-vitro*:	no information at disposal
	Genotoxicity:	no information at disposal
	Mutagenicity *in-vivo*:	no information at disposal
	Germ cell mutagenicity :	no information at disposal
	Reproductive toxicity:	no information at disposal
11.3.	General notes:	
	Even other dangerous properties cannot be eliminated. It is necessary to handle with this product like with chemicals.	

SECTION 12. Ecological information

12.1. Toxicity

The results obtained by testing Zeolite of Clinoptilolite type did not enable to define LC50 for fish and daphnia, because the tested animals have survived the maximum concentrations exceeding the limits for classification of the preparation into the group of substances ''for fish and other animals it is almost non-toxic''. Based on the 96-hour static and acute toxicity tests on fish (*Cyprinus carpio L., Poecilia reticulata Peters*) and 24-hour acute and immobilization test on daphnia (*Daphnia magna Straus*), the natural Zeolite was classified as to be a substance almost non-toxic for fish and daphnia (Final Report of research No. 53/NRL/T-102).

Pursuant to the expert's opinion if the NRL for pesticides UVM Košice No. 265/2004 NRL/P-1219 rekl., the natural Zeolite is ''relatively innocuous for domestic animals, livestock and free living animals'' (Z4), ''for fish and other water animals, it is almost non-toxic'' (Vo4), and ''for birds, in case of exceeding the prescribed doses of concentrations, it is relatively harmless'' (Vt5). ''It is not suitable for earthworm population''.
Zeolite of Clinoptilolite type is registered as feed additive (1g568).

12.2. Persistence and degradability

no information is at disposal

12.3. Bioaccumulative potential

no information is at disposal

12.4. Mobility in soil

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no information is at disposal

12.5. Results of PBT and vPvB assessment

no information is at disposal

12.6. Other adverse effects

no information is at disposal

SECTION 13. Disposal considerations

Waste treatment methods

The method of waste disposal - mechanically. The residues of Zeolite (without any other additives) can be mixed in the soil, because Zeolite is registered as the soil auxiliary substance.

Zeolite does not contaminate even water - it can be also washed away into sewerage.

Zeolite is not a dangerous waste!

SECTION 14. Transport information

Transporting/shipment by road (ADR)	
UN number:	no information is at disposal
UN proper shipping name:	no information is at disposal
Transport hazard class:	no information is at disposal
Packing group:	no information is at disposal
Environmental hazards:	no information is at disposal
Special precautions for user:	no information is at disposal
Transporting/shipment by rail (RID)	
UN number:	no information is at disposal
UN proper shipping name:	no information is at disposal
Transport hazard class:	no information is at disposal
Packing group:	no information is at disposal
Environmental hazards:	no information is at disposal
Special precautions for user:	no information is at disposal

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Transporting/shipment by inland waterways (ADN)	
UN number:	no information is at disposal
UN proper shipping name:	no information is at disposal
Transport hazard class:	no information is at disposal
Packing group:	no information is at disposal
Environmental hazards:	no information is at disposal
Special precautions for user:	no information is at disposal
Transporting/shipment by sea (IMDG)	
UN number:	no information is at disposal
UN proper shipping name:	no information is at disposal
Transport hazard class:	no information is at disposal
Packing group:	no information is at disposal
Environmental hazards:	no information is at disposal
Special precautions for user:	no information is at disposal
Transport in bulk according to Annex II of MARPOL73/78 and the IBC code:	no information is at disposal
Transporting/shipment by air (ICAO-TI/IATA-DGR)	
UN number:	no information is at disposal
UN proper shipping name:	no information is at disposal
Transport hazard class:	no information is at disposal
Environmental hazards:	no information is at disposal
Special precautions for user:	no information is at disposal

SECTION 15. Regulatory information

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

Trade name:	Tribomechanically activated ZEOLITE CLINOPTILOLITE
Date of compilation:	12.09.2015.

	According to Directive No. 67/548/EHS DSD	**ES CLASSIFICATION:** This substance has not any prescribed classification according to Directive No. 67/548/EHS DSD Based on his own decision, the raw material's manufacturer labelled the substance in the following way, as follows: **Warning dangerous symbols**: it is not given **R-sentences**: it is not given **S-sentences**: S2 keep it out of range of children. S25 Avoid contact with eyes.
	According to Directive (ES) No. 1272/2008	**GHS CLASSIFICATION:** This substance has not the prescribed classification according to Directive (ES) No. 1272/2008 Based on his own decision, the raw material's manufacturer labelled this substance as follows: **GSH pictograms**: it is not given **warning word**: it is not given **warning notice**: it is not given **safety notice - prevention**: P102: Keep it out of range of children. **safety notice - response**: it is not given **safety notice - storage**: it is not given **safety notice - disposal**: it is not given
15.2.	Warning designation	
	Handling with it is in conformity with good operational hygiene, and principles of safety and health protection in working.	

SECTION 16. Other information

16.1.	Key literature references and source of data:	This Safety Data Sheet has been revised and reworked according to the Regulation of the European Parliament and Council (ES) No. 1907/2006 on registration, evaluation, authorization and limitation of chemical substances (REACH).

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16.2.	Classification and procedure used to derive the classification for mixture according to Regulation (EC) 1272/2008 (CLP)	
Classification		Classification procedure
This substance has not the prescribed classification according to Directive (ES) No. 1272/2008		Based on his own decision, the raw material's manufacturer labelled this substance.
16.3.	Further information:	The Safety Data Sheet contains the data necessary for ensuring the safety and health protection in working and environment protection. The given data corresponds to the present state of knowledge and experience, and they are in conformity with the legal regulations. The particular conditions of using this product at the consumer, however, they are outside the range of our surveillance and control. The consumer is responsible himself/herself for observance if the security provisions.