

1. GENERAL INFORMATION

Chemical name	:	Hydrated sodium-potassium-calcium-alumino-silicate	CAS No	:	12173-10-3
Chemical family	:	Natural zeolite			
Chemical abstract name:		Clinoptilolite			
Chemical formula	:	$(\text{Na}_{0.5}\text{K}_{2.5})(\text{Ca}_{1.0}\text{Mg}_{0.5})(\text{Al}_6\text{Si}_{30})\text{O}_{72} \cdot 24\text{H}_2\text{O}$			

2. MINERAL CONTENT

Clinoptilolite Group 70-85 %

* Studies on identification and the origin, petrographic and mineralogical analysis of the rock samples with X-Ray Diffractometer.

3. CHEMICAL COMPOSITION

SiO ₂	71,6	BaO	<0,01	SiO ₂ / Al ₂ O ₃	5.0 - 6.3	Mg	0.1 - 0.6
Al ₂ O ₃	11,3	SrO	0,03	Na + K / Ca + Mg	1.4 - 2.2	Ca	0.9 - 1.3
Fe ₂ O ₃	1,39	P ₂ O ₅	0,011	Si	29.4 - 30.1	Na	0.2 - 0.5
MnO	0,02	CaO	2,27	Al	5.6 - 6.1		
TiO ₂	0,08	Na ₂ O	0,86	Fe	0.05 - 0.25		
MgO	0,86	K ₂ O	3,67	K	1.9 - 2.7		

- Analyzed with XRF spectrophotometry. The values are given for reference purposes.

4. PHYSICAL CHARACTERISTICS

Appearance	Granular or powder form	Color	White, light cream, beige.
Standard Particle Sizes	Micronized for animal feed additives, industrial applications	Moisture content	< 4% , < 8% , < 12%
	0-1 mm for animal feed additives		
	1-3 mm for soil conditioner, filter media, animal litter	pH	6,5 – 7,5
	Other sizes could be produced upon request for any other application (animal litter, filter media, etc.)	Solubility in water	Insoluble
Mineral content	Clinoptilolite group 70-85 % / Reactive components 85 – 95 %	Water retention capacity	35 –75%
Bulk density	0,8 - 1,1 g/cm ³	Porosity	35% (average)
Specific gravity	2 – 2,1 g/cm ³	Melting point	1.150 °C
Thermal stability	Stable up to 840 °C	Surface area (BET)	40 - 44 m ² /g

5. CATION EXCHANGE CAPACITY

1,6-2,0 meq/g NH₄⁺ - Ammonium (Kjeldah distillation method)

Main Exchangeable Cations

NH₄, Cs, Pb, As, K, Na, Ca, Ag, Cd, Zn, Ba, Sr, Cu, Hg, Mg, Fe, Co, Al, Cr

(Selectivity of above cations is a function of hydrated molecular size and relative concentrations)

Selectivity

Pb>Cs>NH₄⁺>Ba>Sr>Hg

Primary Absorbing Gases

CO, CO₂, SO₂, H₂S, NH₃, HCHO, Ar, O₂, N₂, H₂O, He, H₂, Kr, Xe, CH₂OH

The above information is intended as general information. Due to the nature of the product the values may vary. It is the customer's responsibility to decide on the suitability and effectiveness of the product before use. Gordes Zeolit Madencilik San. ve Tic. A.S. has the right to change the above mentioned features.

Gordes Zeolit Madencilik San. ve Tic. A.Ş.

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