

TECHNICAL DATA SHEET (TDS)

GENERAL INFORMATION

Chemical Abstract Name:	Clinoptilolite
Chemical Family:	Natural Zeolite
Chemical Name:	Hydrated Potassium, Calcium, Sodium Aluminosilicate
Chemical Formula:	$(Ca, Na, K)_x Al_y Si_{30} O_{72} \cdot 24H_2O$
Cas No:	12173-10-3
Origin:	Gördes Manisa TURKEY
Hts Code - Custom Code:	2530 9000 9039
Einecs No:	Not Found

MINERAL CONTENT (X-RAY DIFFRACTION METHOD)

Clinoptilolite:	% 85-90
Other Clays:	% 0-5
Opal:	% 0-10

CHEMICAL COMPOSITION % (XRF SPECTROMETER)

SiO ₂	70,33	K ₂ O	4,64	TiO ₂	0,1
Al ₂ O ₃	12,15	MnO	< 0,1	MgO	0,52
CaO	2,08	Na ₂ O	0,68	K	0,8
Fe ₂ O ₃	1,14	P ₂ O ₅	0,04	Na	0,3
Pb	0	Cu	18 ppm	Cr	0,1 ppm
Cd	0,1 ppm	Ni	1,1 ppm	Hg	0
Zn	188 ppm				

PHYSICAL CHARACTERISTICS

Appearance:	Granular or Powder	Water Solubility:	None
Porosity:	% 40	Bulk Density:	1-1,2 g / cm ³
Color:	Light Cream	Hardness:	2-3 Mohs
Particle Size:	50 micron - 25 mm	Water Adsorption:	% 42 - 50
Smell:	None	Surface Area:	40 - 45 m ² / gram
Ph:	5,5 - 7	Water Retention:	% 35 - 75

CATION EXCHANGE CAPACITY (CEC)

Total CEC:	100 - 160 meq / 100 g (Methylene Blue Chloride Method)
Main Exchangeable Cations:	N, K, Ca, Na, Fe, Zn, Al, Ba, Pb, Rb, Li, Cu,
Primary Absorbing Gases:	CO, CO ₂ , SO ₂ , H ₂ S, NH ₃ , HCHO, Ar, O ₂ , N ₂ , H ₂ O, He, H ₂ , Kr, Xe, CH ₂ OH