

TSM - 140

Clinoptilolite Zeolite

Data Sheet 211

SiO ₂	66.03%
Al ₂ O ₃	10.47%
CaO	1.55%
MgO	.58%
TiO ₂	.13%
Na ₂ O	3.25%
K ₂ O	1.81%
Fe ₂ O ₃	1.12%
MnO	.027%

MAJOR EXCHANGEABLE CATIONS:

Rb ⁺	Li ⁺	K ⁺	Cs ⁺	NH ₄ ⁺
Na ⁺	Ag ⁺	Cd ²⁺	Pb ²⁺	Zn ²⁺
Ba ²⁺	Sr ²⁺	Cu ²⁺	Ca ²⁺	Hg ²⁺
Mg ²⁺	Fe ³⁺	Co ³⁺	Al ³⁺	Cr ³⁺

Selectivity for the above cations is a function of hydrated molecular size and relative concentration.

Solid Density	100lb./ft. ³ 1603 Kg./m ³
Bulk Density (determined by gradation)	45-80 lb./ft. ³ 720-1283 Kg./m ³
Hardness (mohs scale)	5.1
Pore Size	4.0Å
Pore Volume	15%
Specific Surface Area	1357 yd ² /oz. 40m. ² /g.
Alkali Stability pH	7-10
Acid Stability pH	3-7
Thermal Stability	1202°F 650°C

PRIMARY ADSORBING 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 ₃ OH
Freon	Formaldehyde	

Cation Exchange Capacity 1.8m.e./g.
(This number may vary as C.E.C. values are relative to procedure.)