

# Table of data

Zeolite Products, Varsseveld, The Netherlands  
 Registration No. GMP+ : GMP-001846  
 Registration No. VWA: α NL09137602  
 Safe Feed Supplier, GMP+ B3 certificated product.



www.zeolite-products.com



## NAME TITLE OF THE MATERIAL E 568

Name of material	Natural zeolite
Chemical name	Hydrated Calcium Aluminosilicate
Mineralogical form	Clinoptilolite, of sedimentary origin, E 568
Chemical type	Molecular sieve
Empirical formula	(Ca,K <sub>2</sub> ,Na <sub>2</sub> ,Mg) <sub>4</sub> Al <sub>8</sub> Si <sub>40</sub> O <sub>96</sub> .24H <sub>2</sub> O
CAS No.	12173-10-3
EC No.	215-283-8

## CHEMICAL COMPOSITION

Silicon Dioxide	SiO <sub>2</sub>	64,18-75,50%	Sodium Oxide	Na <sub>2</sub> O	0,10-2,97%
Aluminum Oxide	Al <sub>2</sub> O <sub>3</sub>	10,93-14,80%	Titanium Dioxide	TiO <sub>2</sub>	0,08-0,39%
Calcium Oxide	CaO	1,43-11,68%	Phosphorus Oxide	P <sub>2</sub> O <sub>5</sub>	0,01 - 0,18%
Kalium Oxide	K <sub>2</sub> O	1,24-4,24%	Iron Oxide	FeO	0,29-1,43%
Iron Oxide	Fe <sub>2</sub> O <sub>3</sub>	0,12-2,45%	Sulfur Oxide	SO <sub>3</sub>	0,00-0,23%
Magnesium Oxide	MgO	0,29-1,43%	L.O.I. Humidity		max. 6%
			Si / Al		4,8 - 5,4

## MINERALOGICAL COMPOSITION

Clinoptilolite	82 - 84%	Plagioclase	3 - 4%
Cristobalite	9%	Quarz	traces
Clay mica	2 - 3%	Dioxins & - PCB's :	max. 1,5 ng 2,3,7,8-TCDD TEQ/kg
		Tested on heavy metals and samonella	

## PHYSICAL-MECHANICAL DATA

Softening point	1 260 °C	Porosity	24 - 32 %
Melting point	1 340 °C	Effective diameter of pores	0,4 nm (4 angstrom)
Pour point	1 420 °C	Compactness	70%
Compression strenght	33 MPa	Whiteness	70%
Specific weight	2 200 - 2 440 kg/m <sup>3</sup>	Mohs hardness	2 - 3
Volume weight	1 600 - 1800 kg/m <sup>3</sup>	Grindability according to VTI	kVTI = 1,628
Appearance and smell	grey-green-without smell	Water Absorption	34 - 36 %
		pH	6,8 - 7,2

## ION EXCHANGE PROPERTIES

Total exchange	Ca <sup>2+</sup> 0,64 - 0,98 mol/kg	K <sup>+</sup> 0,22 - 0,45 mol/kg
	Mg <sup>2+</sup> 0,06 - 0,19 mol/kg	Na <sup>+</sup> 0,01 - 0,19 mol/kg
Partial exchange capacity NH <sub>4</sub> <sup>+</sup>		min. 0,70 mol/kg
Total exchange capacity NH <sub>4</sub> <sup>+</sup>		1,2 - 1,5 mol/kg
Sorption of steam by dehydrated rock	at relative humidity of 52 %	7,5 - 8,5 g H <sub>2</sub> O/100g
	at relative humidity of 98 %	13,5-14,5 g H <sub>2</sub> O/100g

Major Exchangeable: Rb, Li, K, Cs, NH<sub>4</sub><sup>+</sup>, Na, Ca, Ag, Cd, Pb, Zn, Ba, Sr, Cu, Hg, Mg, Fe, Co, Al, Cr.

Selectivity: Cs<sup>+</sup> > NH<sub>4</sub><sup>+</sup> > Pb<sup>2+</sup> > K<sup>+</sup> > Na<sup>+</sup> > Ca<sup>2+</sup> > Mg<sup>2+</sup> > Ba<sup>2+</sup> > Cu<sup>2+</sup>, Zn<sup>2+</sup>

Primary Adsorbing Gases CO, CO<sub>2</sub>, SO<sub>2</sub>, H<sub>2</sub>S, NH<sub>3</sub>, HCHO, Ar, O<sub>2</sub>, N<sub>2</sub>, H<sub>2</sub>O, He, H<sub>2</sub>, Kr, Xe, CH<sub>2</sub>OH, Freon

Information herein is accurate to the best of our knowledge, but may be subject to change without notice. Suggestions are made without warranty or guarantee to results. Before using, user should determine the suitability of the product for its intended use and user assumes the risk and liability in connection herewith.

## DATA ON REACTIVITY

Stability against acids	79,50%	Hazardous decomposition	none
Thermal stability	up to 400 °C	Hazardous polymerisation	it does not occur
Solubility in water	0		