

SCHEDA TECNICA
Table of data on raw material

TITOL OF THE MATERIAL

Mineralogical form	Clinoptilolite
Chemical name	Hydrated aluminosilicate of alkaline metals and alkaline earth metals
Chemical type	Molecular sieve
Empirical formula	(Ca,K ₂ ,Na ₂ ,Mg) ₄ A ₁₈ Si ₄₀ O ₉₆ .24H ₂ O)

PHYSICAL / MECHANICAL DATA

Softening point	1 260 °C	Porosity	24-32%
Melting point	1 340 °C	pH	6.7 – 7.7
Pour point	1 420 °C	Compactness	70%
Compression strength	33 MPa	Whiteness	70%
Specific weight	2 200 - 2 440 kg/m ³	Mohs hardness	1,5 -
2,5			
Volume weight	1 600 - 1 800 kg/m ³	Grindability	
Appearance and smell grey-green-without smell		According to VTI	kVTI 1,628

DATA ON REACTIVITY

Stability against acids	79,55%	Hazardous decomposition	none
Thermal stability	up to 400 °C	Hazardous polymerisation	il does not occur
Solubility in water	0	Ash content:	94.98 at 600° C
Humidity at 105°C	max 6%		

CHEMICAL COMPOSITION

SiO ₂	65.9-71,6%	MgO	0,5-1,2%
Al ₂ O ₃	11.7-13.1%	Na ₂ O	0,2-1,3%
CaO	2,7-5.2%	TiO ₂	0,1-0,3%
K ₂ O	2,2-3,4%		
Fe ₂ O ₃	0.7-1,8%	SiAl	4,7-5,5

MINERALOGICAL COMPOSITION

Clinoptilolite	80.0-95.0%	Plagioclasì, Rutile,	12.0-7.9%
Illite	4.0-6.1%	Apatite ETC	

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ION EXCHANGE PROPERTIES

NH⁺ substitution capacity 8 500 mg NH⁺ / 1 kg

2+

Total exchange	Ca ₂₊	0,64 - 0,98 mol/kg	K~	0,21 - 0,46 mol/kg
	Mg	0,04 - 0,19 mol/kg	Na~	0,01 - 0,19 mol/kg
Partial exchange capacity				mm. 0,70 mol/kg
Total exchange capacity				1,2 - 1,5 mol/kg
Sorption of steam by dehydrated rock		at relative humidity of 51.8 %		7,6 - 8,5 g H ₂ O/100g
		at relative humidity of 98 %		13,5-14,7 gH ₂ O/100g

SELECTIVITY

> NH₄⁺ > Pb²⁺ > K⁺ > Na⁺ > Ca²⁺ > Mg²⁺ > Ba²⁺ > Cu²⁺ > Zn²⁺

GRANULATION AND PACKING

GRANULATION: mm 0.0 – 0.2 / 0.0 – 0.2 G / 0.2 – 0.5 / 0.2 – 1.0 / 0.5 – 1.0 / 1.0 – 2.5 / 2.5 – 5.0 / 5.0 – 8.0 / PACKING: Bags of 25 kgnt or Big Bags of 1.000 kgnt on pallets + SILOS TRUCK

TOXICOLOGICAL EVOLUTION

It is not classified as a poison from the point of view of ascertained values of oral and dermal toxicity.

CERTIFICATE

REGOLAMENTO EC 568 CATEGORIA ADDITIVI N° 1g 568 DEL 09.07.2013