

Under the aluminosilicate program, "Alumina" doo Zvornik offers synthetic zeolite Type 4A for detergents. Zeolite Type 4A is a multifunctional builder specifically developed as an alternative to phosphate type builders, which meets the high requirements of household detergents. The chemical and physical composition of zeolite 4A ensures high levels of solubility and detergency. The zeolite composition is rather similar to the composition of soil in water-flows. Its settling does not produce negative effects on ecosystems and thus it is more environmental friendly than other builders.

Along with the key function of extracting calcium and magnesium from water for washing, zeolite is characterised by other useful properties:

Liquid bearing capacity: since zeolite can adsorb large quantities of liquid, in the production process liquid ingredients can be easily imported into the detergent.

Impurity binding: the specific crystal structure allows zeolite to adsorb molecules of dispersed substances during the washing process and it is used as a crystallizing surface for low solubility salts.

Redeposit prevention: zeolite crystals provide surface for depositing oil, colours and low solubility salts and thus reduce redeposit on fabrics. Thus the colours are prevented from being transferred from one fabric to another.

Iron and manganese stain removal: iron and manganese ion binding during the washing process will remove stains from fabrics which can be caused by the above.

Solution buffering: in the washing process, stains potentially containing 10-20% of organic acids, which can change the pH, are released from the fabric. During washing, the alkalinity remains stable.

Fabric protection: thanks to its specific particle morphology, zeolite minimizes potential damage to fibre while the optimal particle size distribution reduces coats on fibres.

Processing: zeolite ensures high product stability and is easy to use. It is particularly suitable when the tower like super-contact process and the detergent tablets production are not used.

Typical properties of zeolite 4A

Type	Limit values	Typical values
Water content, 1 h 800°C, %	18-20	19
Ion-exchange capacity (mgCaO/g dry), 10 min, at 20°C	min 155	165
Particle size:		
Meon, mm	3 - 5	4
Gross particle (45 microns), %	max 0.3	0.1
Iron:		
Total, ppm	max 150	115
Chelatable iron, ppm	max 40	28
Bulk density, kg/m ³	300 - 400	350
Whiteness, %	min 97	98.8



Packaging: Zeolite is packed in 1 mt jumbo bags. It can also be delivered by tank trucks or cisterns cars. It should be stored and kept in covered areas.

Factory "Alumina" doo
Karakaj bb
75400 Zvornik
Republic of Srpska
Bosnia and Herzegovina

www.aluminazv.ba
sec@aluminazv.ba
Phone: + 387 / 56 260 970
+ 387 / 56 260 435
Fax: + 387 / 56 260 726