



**MILLERS AND PROCESSORS OF BASE MINERALS**

**Date:** 10 October 2019  
**Approved by:** E. Wenger  
**Compiled by:** D. Prevoo

**Pages:** 1 of 2  
**Doc No:** DS078  
**Rev No:** 02

**DATA SHEET**

**DEPATHEX**

Grade: Standard – Granular Silver Impregnated Activated Zeolite

Use: For the removal of pathogens in water and substantial reduction in aerobic bacteria

Chemical Analysis (%)					
SiO <sub>2</sub> 70-72%	Al <sub>2</sub> O <sub>3</sub> 12-15%	Na <sub>2</sub> O 1-2%	K <sub>2</sub> O 3-5%	MgO 0.66-1%	Fe <sub>2</sub> O <sub>3</sub> 1-1.5%
Chemical Formula (MgCaNaK <sub>2</sub> ) <sub>4</sub> (SiO <sub>2</sub> ) 21H <sub>2</sub> O					

Physical Properties:	
Colour	Light Brown
Dry Bulk Density	0.98g/cm <sup>3</sup>
Specific Gravity	1.95
Uniformity coefficient	1.73
Particle sizes in mm	-2mm +1mm
Effective size	1.7
Water Absorption	Up to 30%
Regeneration Option 1	5% saline solution followed by thorough backwash and rinse
Regeneration Option 2	Hot water wash (±75°C)

**Application:**

The framework structure of Depathex permits reversible absorption of molecules small enough to enter the lattice through channel apertures. The inoculation of Silver into the lattice is effective with little or no loss due to its weak ion exchange capacity of 2.64 Meq/g. The anti-bacterial activity of

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Silver is well known and it has been in use for centuries as a pathogen eradicator. Depathex has been extensively researched & tested over a period of 5 years. Tests undertaken have proven the complete removal of E-coli and Coliforms with a residual time of between 3 & 9 minutes for moderately to heavily contaminated water – increased contact time may be required for excessively high levels of contamination. Cognisance is to be taken of generally accepted water treatment processes when using Depathex. There is a substantial reduction of aerobic bacteria. As the immobilization of the bacteria occurs on the surface of the medium, it is **important to pre-filter all suspended matter** which may cover the medium surface and impair the disinfection efficiency.

**Packaging:**

25kg polywoven bags with inners, 40kg bags and bulk bags.

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