

PUROZITE™ MULTI USE FILTER MEDIA



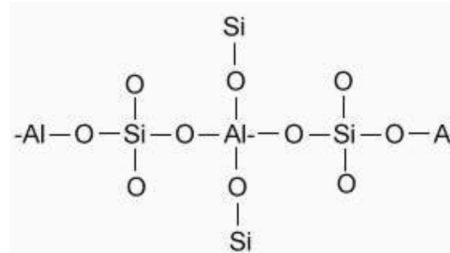
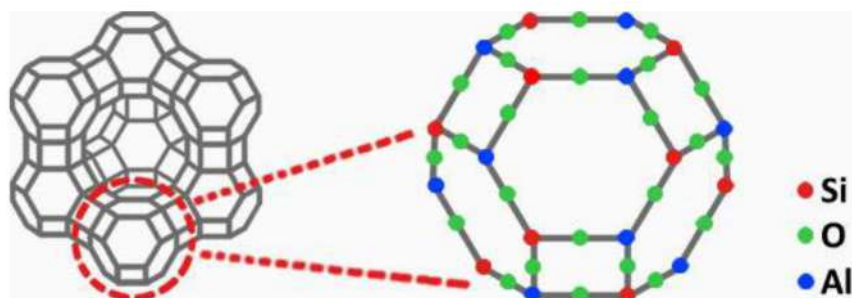
INTRODUCTION

Purozite, with its large specific surface area and its ability to selectively adsorb various substances like ammonia, dissolved organic matter, and numerous cations, has been integrated into the water purification process for both drinking water and wastewater treatment. Additionally, Purozite boasts favourable hydraulic properties, allowing it to efficiently filter large volumes of water. In comparison to alternative adsorbents, Purozite stands out for its stability, superior filtration capabilities, accessibility, and cost-effectiveness.

Purozite holds significant promise as an effective adsorbent in a wide range of water purification and wastewater treatment processes. These applications include water softening, ammonia removal (from sources like municipal wastewater, livestock farms, barn manure, pond water, and swimming pools), nitrogen removal, elimination of dissolved organic matter and color, removal of heavy metals (from natural water, acid mine water, and industrial wastewater), extraction of radioactive substances from wastewater, desalination of seawater, and many other related processes.

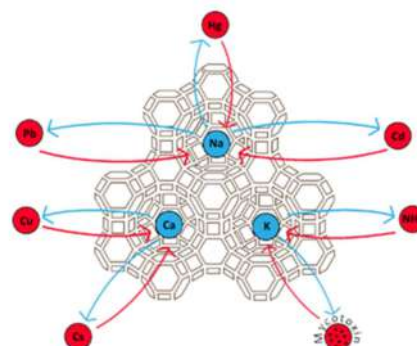
STRUCTURE AND PROPERTIES

The remarkable aspect of Purozite lies in its cage structure and its aluminium and silicon composition, granting the mineral an impressive cation exchange capacity of up to 190 meq/100g.

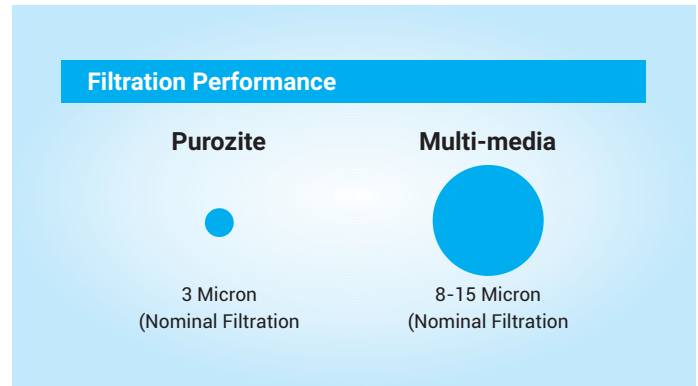
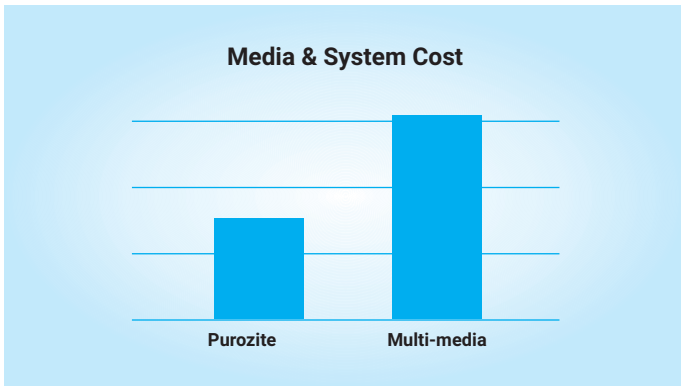
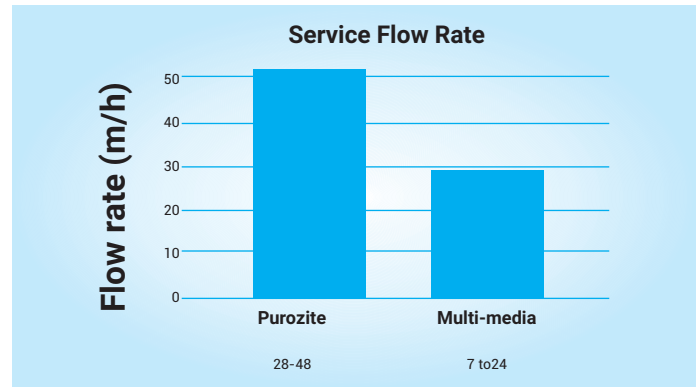
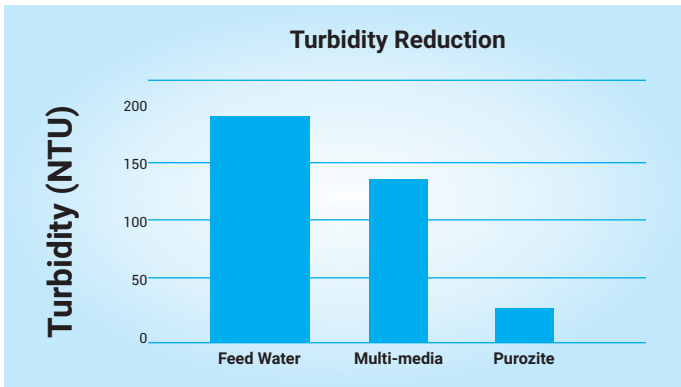


Basic Structure

Purozite media consists of three species: Clinoptilolite-K, Clinoptilolite-Na, and Clinoptilolite-Ca, named after their primary elements. These elements are exchanged during cation exchange to remove heavy metals, toxins, ammonia, and more.



PERFORMANCE



Summary of performance test data for pressure vessels.

Filter media	Filter rating (nominal)	Solids loading capacity
Sand (16 x 30 mesh)	~ 20 μ	1 x
Sand & Anthracite (16 x 30 mesh)	~ 15 μ	~ 1.4 x
Multimedia	~ 12 μ	~ 1.6 x
Purozite (16 x 30 mesh)	< 4 μ	~ 2.6 x

Purozite is a complete substitute for sand and multimedia.

PHYSICAL PROPERTIES

- Color: Ivory White
- Particle Size: 0.5 - 1.0 mm
- Bulk Density: 850 - 900 Kg/m³
- Specific Gravity: 2.0 g/cm³
- Porosity: 25 - 35 %
- Hardness: 3 (Mohs Scale)
- Single Point Surface Area: 40 m²/g
- Micropore Area: 11 m²/g
- Mesopore Area: 29 m²/g
- Pore Size: 4 angstroms
- Cation Exchange Capacity: 1.6 – 1.9 meq/g

CONDITIONS FOR OPERATIONS

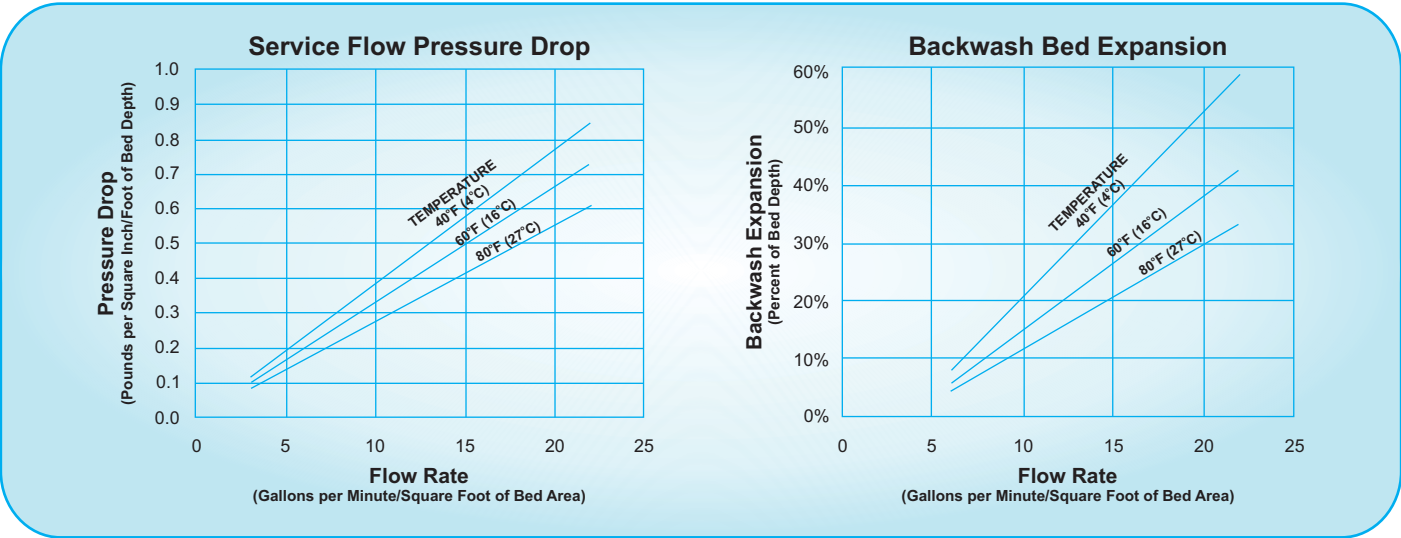
- Freeboard: 30 - 40 %
- Bed Depth: 24 - 38 inches
- Bed Expansion: 20 - 40 % during backwash
- pH Range: 5 - 10
- Thermal Stability: Up to 600 °C
- Service Flow Rate: 25 - 48 (m/h)
- Backwash Flow Rate: 25 - 50 (m/h)

Purozite is a highly porous mineral. Dust inside the pores can blur the water at first usage. In order to prevent blurring of the water, backwash until the dust in its pores is completely removed.

This media is classified under 21CFR Part 182.2729 and under 40 CFR Part 180 as GRAS (Generally Recognized As Safe). It is also listed under NSF Standard 61.

STORAGE AND MATERIAL HANDLING INSTRUCTIONS

- Keep Purozite in a dry and well-ventilated area to prevent moisture absorption.
- Wear appropriate protective gear (gloves, eye protection) when handling Purozite. Avoid inhaling dust. Use appropriate equipment for loading and unloading.



ORDERING INFORMATION

Description	Cu.Ft / Bag	Wt. / Cu.Ft	Bags / Pallet	Weight / Pallet	Pallet Dimensions
Purozite 0.5 – 1.0 mm	1	25 Kgs	20	515 Kgs	45" x 45" x 30"

*Weight Per Cubic Foot is Approximate.
* Sizes Available: 0.5 - 1.0 mm, 0.7 - 1.6 mm, 1.6 - 3 mm, 3 - 5 mm

The information and recommendations provided in this publication are based on data that we believe to be reliable. These recommendations are made in good faith but do not constitute any warranty or performance guarantee. Given that conditions and methods of using our products are beyond our control, STARKE does not provide any express or implied warranties concerning this product, including, but not limited to, any implied warranty of merchantability or fitness for a particular purpose. We advise the user to determine the suitability and performance of our products by conducting tests with their own equipment.

Please note that specifications may change without prior notice.