Specifications and Installation

Crushed Glass Filtration Media

Technical Data

- **Specific Gravity**
  2.50
- **Bulk Density**
  75 to 80 lbs/cu.ft.
- **Effective Size**
  Ranges from 0.30 to 1.10 mm
- **Coefficient of Uniformity**
  Ranges from 1.45 to 1.80
- **Estimated Sphericity**
  Approximately 0.40
- **Porosity**
  Typically 48%
- **Shape**
  Angular to sub-angular
- **Permeability**
  Typically 4.0 X 10^{-1} cm/sec
- **Physical Composition**
  Amorphous soda-lime glass
- **Typical Chemical Composition**

  SiO_2 .....73%
  Na_2O 14%
  CaO 10%
  MgO .....<1%
  Al_2O_3 .....<1%
  SO_3 .....<1%

Packaging

- 50-lb plastic bags
- 40 bags per pallet
- 800 bags per truckload or 40' container

For Use in Residential, Commercial, Industrial, and Environmental Applications

Vitroclean® is made from 100% recycled glass. It is crushed, dried at 250°F, and screened into various sized fractions to achieve optimal filtration properties.

As the grains are nearly all angular in shape and have a fairly high degree of sphericity, the filter bed tends to have more open packing resulting in better permeability than a filter of spherical silica grains.

Because glass is amorphous and has no internal crystal structure, the particles are homogenous and have no grain boundaries. This gives glass more resistance to breakdown through filtration/back washing cycles.

Furthermore the lack of grain boundaries minimizes cracks where bacteria can lodge and resist flushing in back washing.

Glass particles have a slight negative charge on their surface, which tend to hold onto fine particles during the filtration cycle. Upon back washing, this weak charge apparently releases these fine particles to the effluent thereby contributing to better filtration action. Theoretically, at least one should see less use of back flushing water owing to the better permeability of a glass filter.

As crushed glass is lighter than silica sand, between 15 and 20% less glass is needed to fill a filtration unit. With the better filtration characteristics and lower density glass is a superior filtration media for many filtration applications. It can be used in swimming pool and spa filters as well. Glass filter media are now being used in storm water runoff filtration systems as a replacement for silica sand. Using glass not only results in good performance, but in real cost benefits over the life of a filter bed.

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Typical Vitroclean® Filtration Product Specifications

Product	Effective Size	Approximate Size Range
Vitroclean Pebble	N/A	1.5 x 3.0 mm (size varies)
Vitroclean Green and Aquatic	0.45 mm - 1.1 mm	1.1 x 0.3 mm

Vitroclean Green and Aquatic replace #20 silica sand in sand media water filters. Vitroclean Pebble is placed in the bottom of the filter to cover the laterals to minimize movement of the laterals and ensure proper flow on backwashing.

Installation Instructions

- Always consult and follow the instructions provided by your filter manufacturer.
- We recommend the use of a pea gravel, coarse sand or Vitroclean Pebble to cover the laterals, even if the filter manufacturer does not recommend it.
- If the filter manufacturer makes no recommendation on the use of pea gravel, we recommend a ratio of 70% Vitroclean Green or Aquatic to 30% Vitroclean Pebble or clean pea gravel.
- On a filter change out, while we recommend the removal of all sand, it is not required. Vitroclean can be used in combination with sand or other filter media.
- Be sure to backwash before using the filter to flush out any fine material.