instrAction® P

Absorber resins for removing PFAS from wastewater or drinking water.

General Description

instrAction® P absorber resins are a newly developed resin family with a functionalized polyamine surface dedicated to the removal of PFAS from aqueous media. The resin was designed and tested by instrAction. P-type resins comprise a polyvinylamine multi-functional layer, which forms its binding and capturing sites, thus resulting in high selectivity and chemical stability. P-type resins were developed exclusively for the removal of PFAS at PoE, PoU and industrial applications.

Performance Benefits

General

- P series resins are dedicated to PFAS removal.
- Homogeneous flow at low back pressure.
- Linear pressure drop gradient for the whole bed depth.
- High productivity enabling small beds and filter miniaturisation.
- Mixing/combination with other filter media like activated carbon or ion exchange resins is possible.

PFAS Removal

- Wide range of PFAS are removed from wastewater or drinking water below the detection limit in a single filtration step.
- Outstanding productivity and capacity for short- and long-chain PFAS.
- Reliable depletion rate with outstanding capacities* and stable bindings.
- The absorber resin is regeneratable. After the elution of PFAS, the absorber can be reused.

Typical Application

instrAction® P resins are especially designed for the use in wastewater or drinking water systems and filters for commercial and industrial applications. The main application of this resin is the removal of PFAS through binding, combined with longevity, robustness, and high performance.

* depending on cartridge dimension, particle size and bed height

About instrAction

instrAction has been committed to implementing breakthrough innovations for the water treatment industry. Since its founding, instrAction has been expanding its activity at a fast pace. The know-how combines the selectivity of absorber resins with the demands for modern water purification.

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Resin Characteristics

Resin Type	instrAction® P
Available Particle Sizes	• 30 – 70 µm, irregularly shaped resin • 100 – 300 µm, irregularly shaped resin • 315 – 500 µm, irregularly shaped resin • 600 – 1400 µm, irregularly shaped resin
Matrix	Crosslinked functionalized polyvinyl amine
Shipment Form	Wet bulk resin, flushed with 1 M NaCl
Appearance	Tan to light brown
Functional Groups	Amino and C12 groups

Product Data

Applicable pH range	0 - 14
Water Content	50 to 60 % (w/w) **or** dried to 40 +/- 2% (w/w) for flowability
Bulk Density	≈ 0,5 g/cm³ at 40% moisture
Operating temperature	4 – 60°C
Volume Change	not applicable
Pre-Treatment:	Flush with 10 BV water at 10 BV/h
Storage Conditions:	at 10 - 30°C protected from light

Technical Integration

- Preferable separate packed layer of resin to guarantee constant water flow through the resin bed.
- Swelling characteristics allow for densely packed beds using axial or radial filter configuration.
- Resin can be combined with any other filtration technology, preferably activated charcoal.

Additional Information & Regulations

Toxicity

The safety data sheet must be followed. It contains additional data on product description, transport, storage, handling, safety and ecology.

Disposal

In the European Community resins for water filtration must be disposed of according to the European waste nomenclature which can be accessed on the internet-site of the European Union.

Storage

It is recommended to store resin at temperatures above the freezing point of water under the roof in dry conditions without exposure to direct sunlight.

Disclaimer

This document contains important information and must be read in its entirety.

The instrAction resins were developed for the purification of drinking water as well as industrial applications. They are dedicated to the binding of heavy metals or bacteria from solution. The resins exhibit a remarkable buffer capacity, therefore a careful control of the pH value is strongly recommended, to ensure reproducible performance.

The instrAction resins are usually applied in cartridges, columns or stirred tanks. The use as bulk material is limited to exceptional cases.

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Our products are sold per the current version of our General Conditions of Sale and Delivery.

If any questions occur, please contact an instrAction specialist!