



# instrAction® M

**Resin for drinking water filtration comprising excellent heavy metal depletion combined with outstanding productivity.**

## General Description

instrAction® M series resins are a newly developed resin family with a functionalised polyamine surface dedicated to the removal of heavy metals from aqueous media. The resin was designed and tested by instrAction. M-type resins comprise a porous crosslinked polyvinyl amine functional layer, which forms its binding and capturing sites, thus resulting in high chemical stability. This resin exhibits extended mechanical stability at moderate back pressure. M-type resins were developed for a wide variety of PoU and industrial applications.

## Performance Benefits

### General

- M-Type resins are addressing a wide range of heavy metals.
- 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.

### Heavy Metal Removal

- Wide range of heavy metals are removed from tap water below the detection limit in a single filtration step.
- Reliable depletion rate with outstanding capacities\* and stable bindings.

## Typical Application

instrAction® M resins are specially designed for use in drinking water systems and filters for commercial and industrial applications. The main application of this resin is the removal of heavy metals, and special micropollutants through simple filtration, combined with longevity, robustness, and high performance.

## 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.

## Contact

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\* depending on cartridge dimension, particle size and bed height

## Resin Characteristics

Resin Type	instrAction® M
Particle Size	<ul style="list-style-type: none"><li>• 30 – 70 µm, irregularly shaped resin</li><li>• 100 – 300 µm, irregularly shaped resin</li><li>• 315 - 500 µm, irregularly shaped resin</li><li>• 600 – 1400 µm, irregularly shaped resin</li></ul>
Matrix	Silica and crosslinked functionalised polyamine combined
Shipment Form	Wet bulk resin, flushed with 1 M NaCl
Appearance	Tan to light brown
Functional Groups	Amino and Iminodiacetic acid groups
Water Content	50 to 60 % (w/w)
Bulk Density	≈ 0,5 g/cm <sup>3</sup> at 55% moisture
Volume Change	ca. 20% upon wetting
Storage Conditions:	at 10 - 30°C protected from light

## Recommended Working Conditions

Applicable pH range	6.5 – 9.0 (drinking water range)
Operating temperature	4 – 60°C
Pre-Treatment:	Flush with 10 BV water at 10 BV/h

## Technical Integration

- Preferable separate packed resin layer 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.

## 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 have to 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 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!

**instrAction. Pioneering water filtration technology.**