SCU™ specialty trace metals removal media

For removal of transition metals from industrial wastewater, groundwater, and stormwater runoff

Description

SCU specialty media is a proprietary adsorbent which is similar in appearance to granular activated carbon or anthracite but with a higher density and particle hardness. It removes trace levels of various heavy metals from complex waters to levels typically not possible with standard ion exchange resins.

Ion exchange is a proven technology to achieve metals discharge standards but in many cases has difficulty in achieving effluent levels below 25 ppb, depending on the contaminant and chemistry of the water. With many industries facing stricter metals discharge levels, Xylem Water Technologies has developed SCU specialty media. This SCU class of adsorbent can routinely achieve effluent levels below 1 ppb for most heavy metals and can achieve levels below 12 ppt for mercury.

Applications

SCU specialty media has been successfully used in a number of applications:

- Industrial wastewater
- Contaminated groundwater
- Stormwater runoff
- Cooling water blowdown

Metals removed by SCU specialty media include:

- Cadmium
- Trivalent chromium
- Copper
- Lead
- Mercury
- Nickel
- Zinc





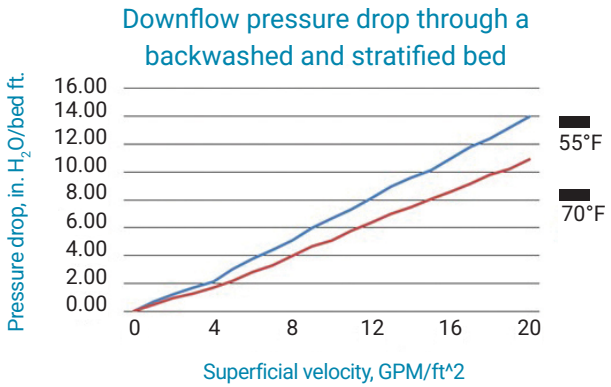
Service and disposal options

To apply SCU specialty media, Xylem offers integrated treatment alternatives which include permanent or temporary exchange vessels/ systems. Our service exchange approach integrates equipment and service combinations, thereby minimizing the customer's capital investment and reducing overall space requirements. Service exchange provides the ultimate flexibility to add or remove treatment capacity as your business grows or compliance limits change. This option also saves valuable manufacturing space while minimizing your maintenance and installation requirements.

Once exhausted, spent SCU media can be transferred to Xylem's Resource Conservation and Recovery Act (RCRA)-licensed centralized treatment and recovery facility where both non-hazardous and hazardous wastes are treated in compliance with all state and federal guidelines and valuable metals are recycled when possible.

Features and benefits:

- Trace metals removal possible to ppb / ppt levels
- Applications fully supported by Xylem's treatability laboratory to evaluate and tailor solutions to each metals removal application
- Standard SCU media systems are designed for flows from 1 to 1,200 GPM, can add units in parallel for higher flow rates
- SCU specialty media systems are simple to install and operate
- Service based offerings reduce capital investment required
- Full service capabilities for system maintenance, spent media exchange and disposal available



Chemical properties

Contact pH	6 to 7
Typical metals capacity (lb/ft³)	0.5 - 1.5 lb/ft³

Physical properties

Particle size	8 X 30 mesh (0.6 x 2.4 mm)
Bulk density (lb/ft³)	39 – 41
Appearance	Irregularly shapped, granular

Operating conditions

Optimal pH range	5 to 9
Typical service flow rate (gpm/ft³)	1.0 - 2.0
Maximum operating temperature	120° F

xylem.com Tel +1 866.926.8420 (toll-free)

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