AMBERLITE™ PWA10 Resin
Drinking Water Grade
Boron Selective

AMBERLITE PWA10 resin is a unique drinking water grade ion exchange resin designed for the removal of boron from drinking water. The resin can be regenerated using a two-step process consisting of a regeneration step to displace the boron followed by a conversion step.

AMBERLITE PWA10 resin has been shown to be nearly universal in its high selectivity for boron. Salts, including bases, do not interfere significantly. The concentration of boric acid or the salt background in water also has little effect upon the selectivity. This high selectivity for boron and low risk of interference makes AMBERLITE PWA10 resin highly suitable for removal of boron from water derived from desalination.

PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
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<tbody>
<tr>
<td>Matrix</td>
<td>Macroporous polystyrene</td>
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<tr>
<td>Physical form</td>
<td>Opaque beige beads</td>
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<tr>
<td>Total exchange capacity</td>
<td>≥ 0.7 eq/L</td>
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<tr>
<td>Moisture holding capacity</td>
<td>48 – 54%</td>
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<tr>
<td>Shipping weight</td>
<td>700 kg/m³ (44 lb/ft³)</td>
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<tr>
<td>Particle size</td>
<td>Screen grading 0.3 - 1.2 mm (16 to 50 mesh US Std Screens)</td>
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<tr>
<td>Fines content</td>
<td>&lt;0.300 mm: 1% max</td>
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SUGGESTED OPERATING CONDITIONS

Maximum operating temperature 45°C (110°F)
Minimum bed depth 800 mm, recommended 1400 mm (32 in / 56 in)
Typical service flow rate 5 to 35 BV/h* (0.6 – 4.5 gpm/ft²)
Regeneration Please contact Rohm and Haas representative for details

* 1 BV (Bed Volume) = 1 m³ solution per m³ resin

COMMISSIONING AND LIMITS OF USE

AMBERLITE PWA10 resin is suitable for use in potable water applications after an initial commissioning soak in water for 24 hrs followed by a rinse of 5 bed volumes (35 gal/ft³) of potable water at ambient temperature.

The operating capacity of AMBERLITE PWA10 resin depends on the operating conditions.

REGULATORY

Please contact your Rohm and Haas representative for certification information.

Resin products are manufactured in ISO 9001 certified facilities.
HYDRAULIC CHARACTERISTICS

Figure 1 and Figure 2 show the pressure drop data for AMBERLITE PWA10 resin as a function of flow rate and water temperature. Pressure drop data are valid at the start of the service run with clean water and a correctly classified bed. Figure 3 and Figure 4 show the bed expansion of AMBERLITE PWA10 resin as a function of backwash flow rate and water temperature.

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Ion exchange resins and polymeric adsorbents, as produced, contain by-products resulting from the manufacturing process. The user must determine the extent to which organic by-products must be removed for any particular use and establish techniques to assure that the appropriate level of purity is achieved for that use. The user must ensure compliance with all prudent safety standards and regulatory requirements governing the application. Except where specifically otherwise stated, Rohm and Haas Company does not recommend its ion exchange resins or polymeric adsorbents, as supplied, as being suitable or appropriately pure for any particular use. Consult your Rohm and Haas technical representative for further information. Acidic and basic regenerant solutions are corrosive and should be handled in a manner that will prevent eye and skin contact. Nitric acid and other strong oxidising agents can cause explosive type reactions when mixed with Ion Exchange resins. Proper design of process equipment to prevent rapid buildup of pressure is necessary if use of an oxidising agent such as nitric acid is contemplated. Before using strong oxidising agents in contact with Ion Exchange Resins, consult sources knowledgeable in the handling of these materials.

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