



Product Data Sheet

AmberLite™ PWA7 Ion Exchange Resin

Drinking Water-grade Resin for Selective Chromate Removal

Description

AmberLite™ PWA7 Ion Exchange Resin is an anion exchange resin designed for the removal of chromate from drinking water. Its high capacity makes AmberLite™ PWA7 the perfect choice for a simple, once-through, chromate removal process for municipal water treatment systems.

Applications

- Selective chromate removal in a non-regenerable system

Typical Properties

Physical Properties

Copolymer	Styrene-divinylbenzene
Matrix	Gel
Type	Strong acid cation
Functional Group	Sulfonic acid
Physical Form	White to amber, translucent, spherical beads

Chemical Properties

Ionic Form as Shipped	Na ⁺
Total Exchange Capacity	≥ 2.2 eq/L
Water Retention Capacity	38 – 45%

Particle Size [§]

Particle Diameter	350 ± 50 µm
< 300 µm	≤ 1.1 eq/L
> 1180 µm	≤ 0.5%

Density

Shipping Weight	830 g/L
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[§] For additional particle size information, please refer to the [Particle Size Distribution Cross Reference Chart](#) (Form No. 45-D00954-en).

Suggested Operating Conditions

Maximum Operating Temperature	40°C (104°F)
pH Range	
Service Cycle	5 – 6.5
Stable	0 – 14

Hydraulic Characteristics

Estimated bed expansion of AmberLite™ PWA7 Ion Exchange Resin as a function of backwash flowrate and temperature is shown in Figure 1a and Figure 1b. The flowrate necessary to achieve a desired bed expansion for other water temperatures can be calculated with the provided equations.

Estimated pressure drop for AmberLite™ PWA7 as a function of service flowrate and temperature is shown in Figure 2a and Figure 2b. These pressure drop expectations are valid at the start of the service run with clean water and a well-classified bed.

Figure 1a: Backwash Expansion

Temperature = 10 – 40°C

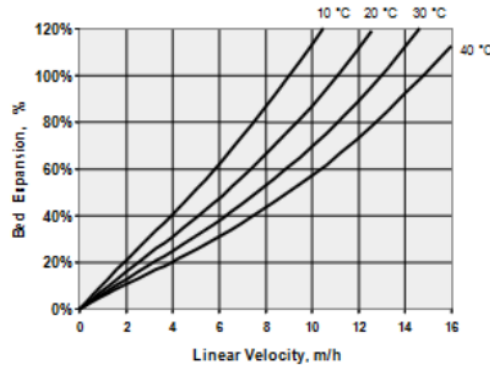


Figure 1b: Backwash Expansion

Temperature = 50 – 105°F

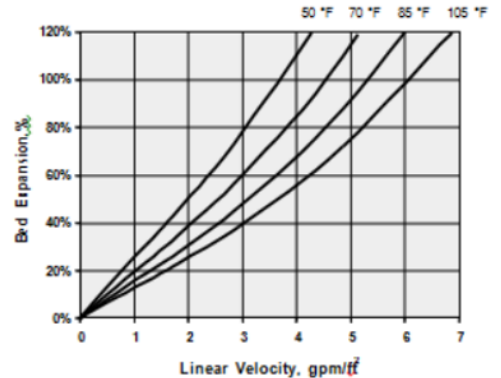


Figure 2a: Pressure Drop

Temperature = 10 – 40°C

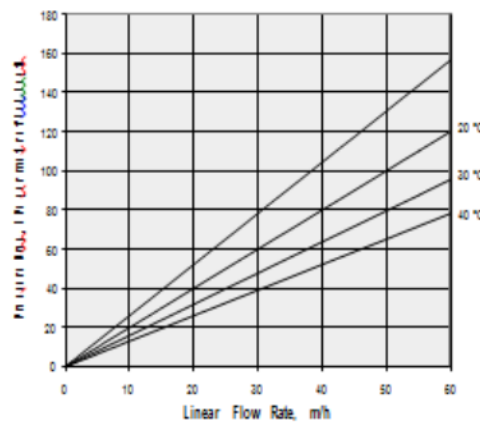
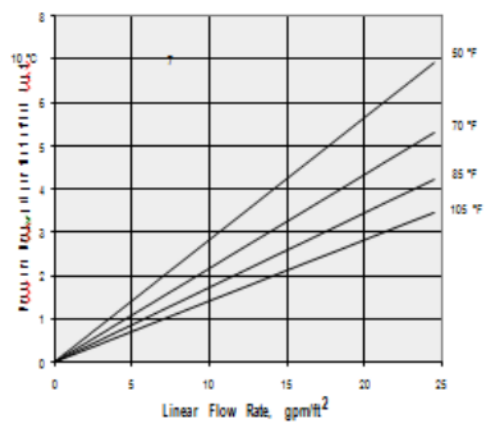


Figure 2b: Pressure Drop

Temperature = 50 – 105°F



Conditioning and Limits of Use

AmberLite™ PWA7 Ion Exchange Resin is suitable for use in potable water applications¹ after an initial commissioning up-flow rinse of 20 bed volumes of water at ambient temperature at the service flowrate.

The operating capacity of AmberLite™ PWA7 resin depends on the operating conditions and the feedwater conditions.

¹ Please confirm the regulatory approval in your specific country of use.

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Please be aware of the following:

- **WARNING:** Oxidizing agents such as nitric acid attack organic ion exchange resins under certain conditions. This could lead to anything from slight resin degradation to a violent exothermic reaction (explosion). Before using strong oxidizing agents, consult sources knowledgeable in handling such materials.

Regulatory Note

This product may be subject to drinking water application restrictions in some countries; please check the application status before use and sale.

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