



上海源叶生物科技有限公司
Shanghai yuanye Bio-Technology Co., Ltd
电话: 400-666-5481 传真: 021-55068248
网址: www.shyuanye.com
邮箱: 3008007435@qq.com

Amberlite XAD7HP大孔吸附树脂

Typical Properties

Physical Properties

Copolymer	Crosslinked aliphatic polymer
Matrix	Macroporous adsorbent
Type	Adsorbent
Physical Form	White, translucent, spherical beads

Nitrogen BET

Surface Area	~520 m ² /g
Average Pore Diameter	~550 Å
Total Pore Volume	~0.95cc/g

Chemical Properties

Water Retention Capacity	61 – 69%
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Particle Size §

Particle Diameter	430 – 690 µm
< 300 µm	≤ 7.0%
> 1180 µm	≤ 8.0%

Density

Particle Density	1.06 – 1.08 g/mL
Shipping Weight	710 g/L

Suggested Operating Conditions

Maximum Operating Temperature	100°C (212°F)
pH Range (Stable)	0 – 14
Bed Depth, min.	750 mm (2.5 ft)
Flowrates Loading	2 – 16 BV*/h
Elution/Desorption Regeneration	1 – 4 BV/h
Rinse	2 – 16 BV/h



Regenerants or Eluting Agents

- Water-miscible organic solvents (methanol, ethanol, isopropanol, acetone, etc.) for hydrophobic compounds
- Pure solvents for regenerating resin fouled by oils and antifoams
- Dilute bases (0.1 – 0.5% NaOH) for weakly acidic compounds
- Strong bases (2 – 4% NaOH) for regenerating resins fouled with proteins, peptides
- Dilute acids (0.1 – 0.5% HCl) for weakly basic compounds
- Dilute oxidizing agents (< 0.5%) such as peroxide to enhance the removal of protein fouling
- Buffer elution for pH-sensitive compounds
- Water when adsorption is from an ionic solution
- Hot nitrogen or steam for volatile materials

* 1 BV (Bed Volume) = 1 m³ solution per m³ resin or 7.5 gal per ft³ resin.

Hydraulic Characteristics

Estimated bed expansion of AmberLite XAD 7HP Polymeric Adsorbent as a function of backwash flowrate and temperature is shown in Figure 1.

Estimated pressure drop for AmberLite XAD 7HP as a function of service flowrate and water temperature is shown in Figure 2. These pressure drop expectations are valid at the start of the service run with clean feed and a well-classified bed.

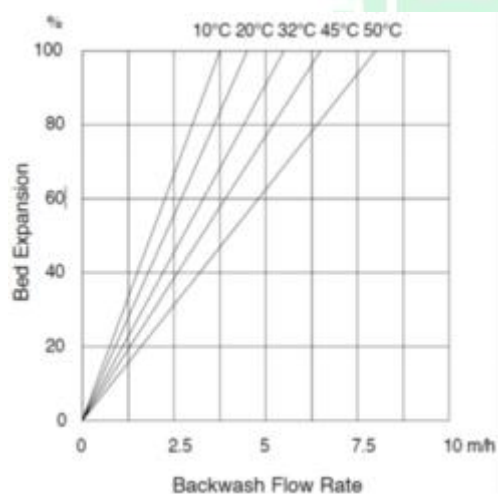


Figure 1: Backwash Expansion
Temperature = 10 – 50°C (50 – 122°F)

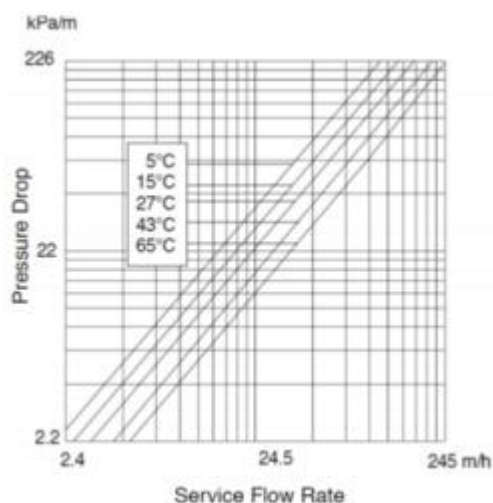


Figure 2: Pressure Drop

Temperature = 5 – 65°C (41 – 149°F)

General Information

Pretreatment

- AmberLite XAD 7HP Polymeric Adsorbent is shipped as a water-wet product imbibed with sodium chloride (NaCl) and sodium carbonate (Na₂CO₃) salts to inhibit bacterial growth. These salts must be washed from the adsorbent prior to use, and it is suggested that this be achieved by washing with water at a linear flowrate of 5 – 10 m/h until the required level is achieved.
- In some sensitive applications, residual monomeric or oligomeric compounds may be required to be removed from the adsorbent.
- A regeneration with the proposed regenerant is also recommended prior to beginning the first service cycle..
- If the regenerant is an alcohol, it must be displaced with water prior to beginning the first loading cycle.

Important Information

- Yuanye strongly encourages its customers to review both their manufacturing processes and their applications of Yuanye products from the standpoint of human health and environmental quality to ensure that Yuanye products are not used in ways for which they are not intended or tested.
- Yuanye product literature, including safety data sheets, should be consulted prior to use of Yuanye products.
- **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



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reaction (explosion). Before using strong oxidizing agents, consult sources knowledgeable in handling such materials.



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