DuPont[™] AmberChrom[™] 50WX4 H 50-100 Fine Mesh Resin

Ion Exchange Resin for Purification of Small Active Molecules

Key Features

- Strong cation exchange resins based a microporous copolymer of styrene and divinylbenzene with a 4% crosslinking level.
- Controlled particle size with a low level of fines.
- Strong insoluble structure resulting in a high resistance to oxidation, reduction, mechanical wear and breakage.

Key Applications

- Solid phase acid catalysis.
- Purification of erythromycin.
- Separation of nucleotide mono-, di-, and tri-phosphates.

Typical Properties

Physical Properties	
Copolymer	Styrene-divinylbenzene
Matrix	Gel
Туре	Cation exchange resins
Functional Group	Sulfonic acid
Physical Form	Opaque, white, spherical beads
Chemical Properties	
Ionic Form as Shipped	H+
Water Retention Capacity	64-72%
Total Exchange Capacity	≥ 1.1 Eq/L

Particle Size	
< 180 µm	≤ 15%
> 500 µm	≤ 15%
Stability	
Whole Uncracked Beads	≥ 90%
Swelling	H+→ Na+ ≤ 1%
Density	
Shipping Weight	768 g/L

Suggested Operating Conditions

Temperature Range	5 – 120°C (41 – 248°F)
pH Range	1 – 14

General Information

- The operational stability of ion exchange resins is largely defined by the particular process involved. Therefore, stability testing under actual process conditions is an important part of the resin evaluation and selection process. Ion exchange resins are tolerant of a wide range of chemical conditions and can be washed over the entire pH range without ill effects.
- In addition, ion exchange resins are tolerant of most inorganic and organic solutions with the exception of strong oxidizing agents. Solutions of nitric or chromic acid, bleach or chlorinegenerating solutions, as well as peroxide should be avoided. Contact with strong oxidizing agents such as nitric acid will result in rapid oxidation. With the right set of conditions, this can result in a potentially explosive reaction.
- Slower degradation with oxygen may be catalytically induced. Therefore, exposure of resins to metal ions (including iron, manganese and copper) should be minimized in oxidizing environments. The physical stability of resins is also affected by the method of product handling. Deep resin beds, small diameter beds, very high flow rates and frequent pumping or agitation all can contribute to resin attrition breakage.

Important Information

• 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.



Have a question? Contact us at: www.dupont.com/water/contact-us All information set forth herein is for informational purposes only. This information is general information and may differ from that based on actual conditions. Customer is responsible for determining whether products and the information in this document are appropriate for Customer's use and for ensuring that Customer's workplace and disposal practices are in compliance with applicable laws and other government enactments. The product shown in this literature may not be available for sale and/or available in all geographies where DuPont is represented. The claims made may not have been approved for use in all countries. Please note that physical properties may vary depending on certain conditions and while operating conditions stated in this document are intended to lengthen product lifespan and/or improve product performance, it will ultimately depend on actual circumstances and is in no event a guarantee of achieving any specific results. DuPont assumes no obligation or liability for the information in this document. References to "DuPont" or the "Company" mean the DuPont legal entity selling the products to Customer unless otherwise expressly noted. NO WARRANTIES ARE GIVEN; ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED. No freedom from infringement of any patent or trademark owned by DuPont or others is to be inferred.