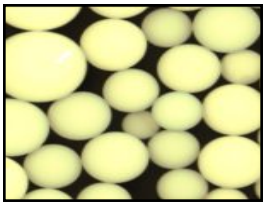
Product Data Sheet

AmberLite™ SCAV3 Cl Ion Exchange Resin

Gaussian, Macroporous, Styrenic, Organic Scavenging Resin for Industrial and Drinking Water Applications

Description



AmberLite™ SCAV3 Cl Ion Exchange Resin is a scavenger to effectively remove natural organic matter (NOM) from waters under different operational circumstances, bringing water quality and operational stability back under control. The uniquely highly porous aromatic structure in combination with the high water content allow a very effective accomodation and hydrophobic adsorption of large molecular weight and complex organic molecules such as humic and fulvic acid.

In industrial demineralization when operated in the OH^-form, AmberLite™ SCAV3 Cl is ideally used as a polisher of remaining organics when placed after the anion vessel to meet the more stringent quality specifications for make-up water. Due to its strong base functionality, it will also have the ability to demineralize. When operated in the Cl^- form, it can alternatively be used as a lead scavenger.

In drinking water production, AmberLite™ SCAV3 Cl operated in the Cl^-form is useful to decolorize (drinking) water by binding larger organics which pass through ultrafiltration, sand filtration, and other first-stage processing steps. Removal of these natural organic compounds can also help to effectively reduce the formation of disinfection byproducts, such as trihalomethanes (THMs).

Applications

- Organic polishing
- Decolorization and reduction of THM precursors
- Demineralization

System Designs

- Co-current

Form No. 45-D01261-en, Rev. 2
August 2020

Typical Properties

Physical Properties	
Copolymer	Styrene-divinylbenzene
Matrix	Macroporous
Type	Strong base anion, Type I
Physical Form	White, opaque, spherical beads
Chemical Properties	
Ionic Form as Shipped	Cl^-
Total Exchange Capacity	≥ 0.7 eq/L (Cl^- form)
Water Retention Capacity	70.0 – 78.0% (Cl^- form)
Particle Size [§]	
> 1180 µm	≤ 1.0%
Stability	
Whole Uncracked Beads	≥ 95%
Density	
Particle Density	1.04 g/mL
Shipping Weight	690 g/L

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

Suggested Operating Conditions

Temperature Range	
OH^- form	5 – 60°C (41 – 140°F)
Cl^- form	5 – 100°C (41 – 212°F)
pH Range	
Service Cycle	2 – 10
Stable	0 – 14

For additional information regarding recommended minimum bed depth, operating conditions, and regeneration conditions for scavenger resins (Form No. 45-D01491-en) in water treatment, please refer to our Tech Fact.

Hydraulic Characteristics

Estimated bed expansion of AmberLite™ SCAV3 Cl Ion Exchange Resin as a function of backwash flowrate and temperature is shown in Figure 1.

Estimated pressure drop for AmberLite™ SCAV3 Cl as a function of service flowrate and temperature is shown in Figure 2. These pressure drop expectations are valid at the start of the service run with clean water and a well-classified bed.

Figure 1: Backwash Expansion

Temperature = 10 – 60°C (50 – 140°F)

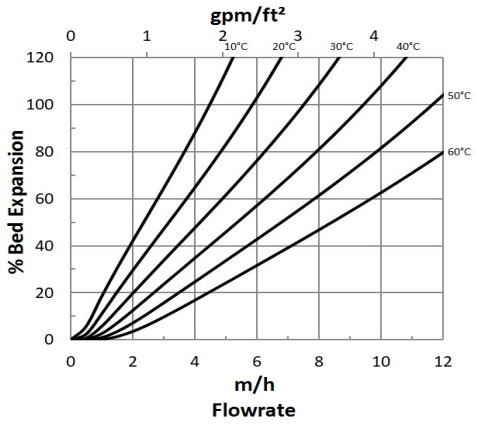
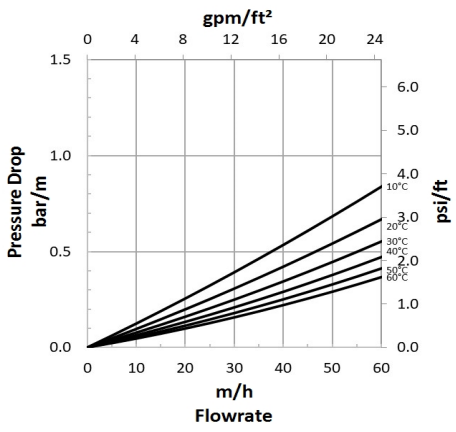


Figure 2: Pressure Drop

Temperature = 10 – 60°C (50 – 140°F)



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Product Stewardship

DuPont has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our product stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our product stewardship program rests with each and every individual involved with DuPont products—from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

Customer Notice

DuPont strongly encourages its customers to review both their manufacturing processes and their applications of DuPont products from the standpoint of human health and environmental quality to ensure that DuPont products are not used in ways for which they are not intended or tested. DuPont personnel are available to answer your questions and to provide reasonable technical support. DuPont product literature, including safety data sheets, should be consulted prior to use of DuPont products. Current safety data sheets are available from DuPont.

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.

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