



Product Data Sheet

DuPont™ AmberLite™ FPA555 Cl Ion Exchange Resin Strongly Basic Anion Exchange Resin

Description

DuPont™ AmberLite™ FPA555 Cl Ion Exchange Resin is a macroporous strongly basic anion exchange resin containing quaternary ammonium groups. It has been specially developed for selective nitrate removal from potable waters in any types of units, including DuPont™ AmberPack™. Indeed, AmberLite™ FPA555 Cl removes nitrate preferentially to sulfate.

Typical Properties

Physical Properties

Copolymer	Styrene-divinylbenzene
Matrix	Macroporous
Type	Strong base anion
Functional Group	Triethylamine
Physical Form	Cream, opaque, spherical beads

Chemical Properties

Ionic Form as Shipped	Cl ⁻
Total Exchange Capacity	≥ 0.90 eq/L
Water Retention Capacity	52 – 58%

Particle Size §

Particle Diameter	650 – 850 μm
Uniformity Coefficient	≤ 1.5
< 300 μm	≤ 0.3%
> 1180 μm	≤ 5.0%

Stability

Swelling	Cl ⁻ → NO ₃ ⁻ : negligible
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Density

Particle Density	1.055 – 1.085 g/mL
Shipping Weight	720 g/L

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

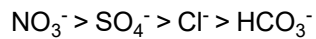
Suggested Operating Conditions

Maximum Operating Temperature	80°C (176°F)
Bed Depth, min.	700 mm (2.3 ft)
Flowrates	
Service	5 – 40 BV*/h (or ≤ 50 m/h)
Regeneration	
NaCl	2 – 8 BV/h
Slow Rinse	2 – 5 BV/h
Fast Rinse	2 – 8 BV/h
Contact Time	
Regeneration	≥ 30 minutes
Regenerant	NaCl
Concentration	5 – 10%
Level, 100% basis	125 – 250 g/L

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

Application Information

The use of DuPont™ AmberLite™ FPA555 Cl Ion Exchange Resin is specially recommended in the case of waters containing more sulphate than nitrate. In such a case, its operating capacity is higher than that of conventional resins. It is due to the relative affinities towards anions which are as follows:



Another consequence is that the nitrate level after breakthrough will never be higher in the effluent than in the influent.

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.

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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.

Have a question? Contact us at:

www.dupont.com/water/contact-us

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