

**AMBERLITE™ FPA555 Cl Ion Exchange Resin**

Strongly Basic Anion Exchange Resin

Description

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 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	Quaternary ammonium
Physical Form	Cream, opaque, spherical beads

Chemical Properties

Ionic Form as Shipped	Cl ⁻
Total Exchange Capacity	≥ 0.90 eq/L
Water Retention Capacity	50 – 56%

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

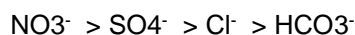
§ For additional particle size information, please refer to the [Particle Size Distribution Cross Reference Chart](#) (Form No. 177-01775).

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
Rinse Requirements	~ 10 BV
Regenerant	NaCl
Concentration	5 – 10%
Level	125 – 250 g/L

Application Information

The use of 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.

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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.



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