

**AMBERLITE™ FPA58 Cl Ion Exchange Resin**

Food-grade, Gel, Acrylic, Strong Base Anion Exchange Resin

**Description**

AMBERLITE™ FPA58 Cl Ion Exchange Resin is an acrylic, gel, Type I strong base anion exchange resin containing a quaternary amine function. It is intended for use in food processing applications. It is an excellent choice for removing ionic species or purifying process streams.

Because of its acrylic polymeric matrix, AMBERLITE™ FPA58 Cl provides better physical stability (i.e., higher osmotic shock resistance) and organic fouling resistance than conventional polystyrene-based resins. Less breakdown and less fouling yields longer resin life within this type of application.

**Applications**

- Food process stream demineralization
- Sweetener deashing

**Typical Properties****Physical Properties**

|                  |                                     |
|------------------|-------------------------------------|
| Copolymer        | Crosslinked acrylic                 |
| Matrix           | Gel                                 |
| Type             | Strong base anion, Type I           |
| Functional Group | Quaternary ammonium                 |
| Physical Form    | White, translucent, spherical beads |

**Chemical Properties**

|                          |                 |
|--------------------------|-----------------|
| Ionic Form as Shipped    | Cl <sup>-</sup> |
| Total Exchange Capacity  | ≥ 1.25 eq/L     |
| Water Retention Capacity | 57 – 64%        |

**Particle Size** §

|                   |              |
|-------------------|--------------|
| Particle Diameter | 600 – 900 µm |
| < 300 µm          | ≤ 2.0%       |

**Density**

|                 |         |
|-----------------|---------|
| Shipping Weight | 730 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 | 35°C (95°F)   |
| Bed Depth, min.               | 700 mm (2.3 ft)   |
| Flowrates                     |   |
| Service                       | 2 – 10 BV*/h  |
| Backwash                      | See Figure 1  |
| Regeneration                  | 2 – 4 BV/h  |
| Slow Rinse                    | Regeneration flowrate for 2 BV                            |
| Fast Rinse (if applicable)    | ≤ 12 BV/h for 4 – 8 BV                                    |
| Contact Time                  |   |
| Regeneration                  | ≥ 60 minutes  |
| Regenerant                    |   |
| Concentration                 | NaCl + NaOH   |
| Level                         | 160 – 240 kg/m <sup>3</sup> (10 – 15 lb/ft <sup>3</sup> ) |
| Temperature                   | ≤ 35°C (95°F)   |

\* 1 BV (Bed Volume) = 1 m<sup>3</sup> solution per m<sup>3</sup> resin or 7.5 gal per ft<sup>3</sup> resin

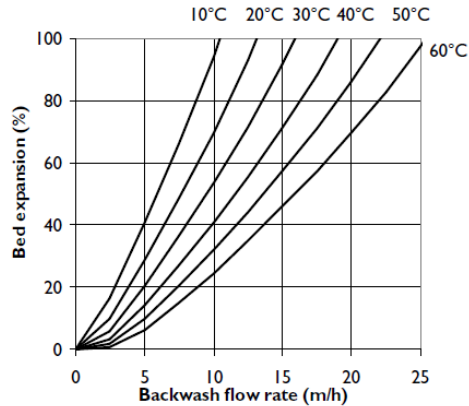
## Hydraulic Characteristics

Estimated bed expansion of AMBERLITE™ FPA58 Cl Ion Exchange Resin as a function of backwash flowrate and temperature is shown in Figure 1.

Estimated pressure drop for AMBERLITE™ FPA58 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.

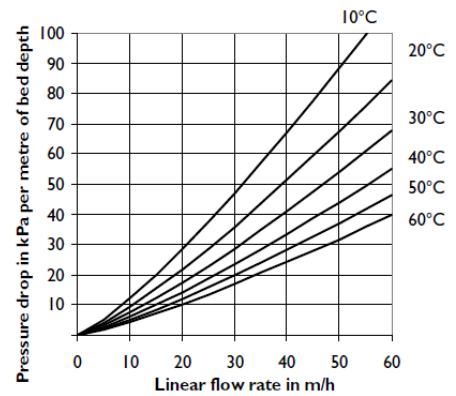
**Figure 1: Backwash Expansion**

Temperature = 10 – 60°C (50 – 140°F)



**Figure 2: Pressure Drop**

Temperature = 10 – 60°C (50 – 140°F)



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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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