SPECIALTY RESIN

PROSELECT™ NITRATE

ProSelect Nitrate is a chloride form macroporous nitrate selective strong base anion resin. It has a unique functionality that increases selectivity for nitrate and decreases selectivity for sulfate. This results in higher operating capacity, lower leakage, and freedom from nitrate dumping if operated past sulfate break. It is intended for all nitrate removal applications, and can also be used to remove perchlorate.

FEATURES

- Highest operating capacity of any nitrate selective resin
- Highly uniform particle size
- Low pressure drop, superior kinetics
- Superior physical stability
- Low sulfate selectivity and high operating capacity
- Certified to NSF/ANSI/CAN Standard 61

Suggested Operating Conditions

Maximum Temperature	
Chloride Form	170°F (77°C)
Minimum Bed Depth	24 inches
Backwash Expansion	25 to 50%
Maximum Pressure Loss	20 psi
Operating pH Range	4 to 10 SU
Regenerant Concentration	
Salt Cycle	5 to 10% NaCl
Regenerant Level	>10 lb/cu.ft.
Regenerant Flow Rate	0.25 to 1.0 gpm/cu.ft.
Regenerant Contact Time	> 30 minutes
Displacement Flow Rate	Same as dilution flow
Displacement Volume	10 to 15 gal/cu.ft
Rinse Flow Rate	Same as service flow
Rinse Volume	35 to 60 gal/cu.ft.
Service Flow Rate	
Average Flow	1 to 4 gpm/cu.ft.
Peak Flow	< 10 gpm/cu.ft.

Packaging Options

500 ml samples, 1 cu.ft. bags, 1 cu.ft. boxes, 1 cu.ft. drums, 7 cu.ft. drums, 42 cu.ft. supersacks

Part Number

Chloride Form	ER20002

Physical Properties

Polymer Matrix	Styrenic Macroporous
Ionic Form	Chloride
Functional Group	Triethylamine
Physical Form	Spherical beads
Color	White to tan
Particle Size	16 to 50 US Mesh (297 to 1190 µm)
% < 50 mesh (300 µm)	< 1%
Minimum Sphericity	95%
Uniformity Coefficient	1.6
Reversible Swelling	Cl to No_3 –5% to –10%
Temperature Limit	250°F (121°C)
Capacity	1.0 meq/ml
Moisture Retention	46 to 65%
Regenerability	Yes
Approx. Shipping Weight	40 to 42 lb/cu.ft. (641 to 673 g/L)

CAUTION: DO NOT MIX ION EXCHANGE RESINS WITH STRONG OXIDIZING AGENTS. Nitric acid and other strong oxidizing agents can cause explosive reactions when mixed with organic materials such as ion exchange resins.

Note: These suggestions and data are based on information we believe to be reliable. However, we do not make any guarantee or warranty. We caution against using these products in any unsafe manner or in violation of any patents. Further, we assume no liability for the consequences of any such actions.

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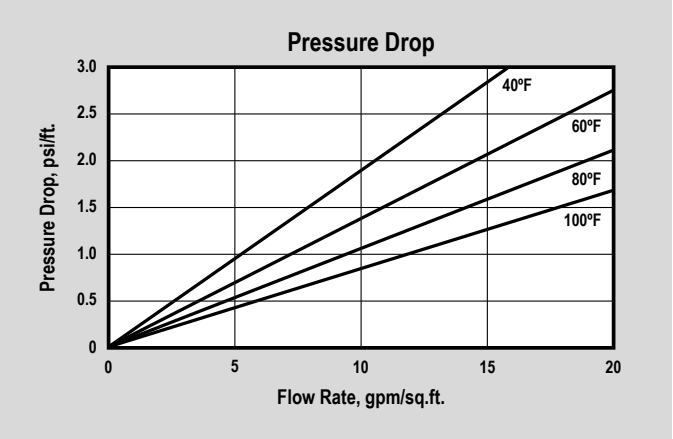
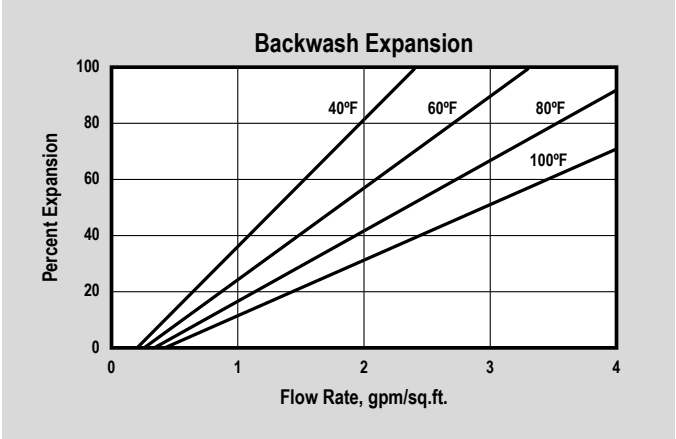
MEMBER Water Quality ASSOCIATION

FORM 1166
EFFECTIVE
APRIL 2023

PROSELECT™ NITRATE



PRESSURE DROP — *The graph above shows the expected pressure loss per foot of bed depth as a function of flow rate at various temperatures.*

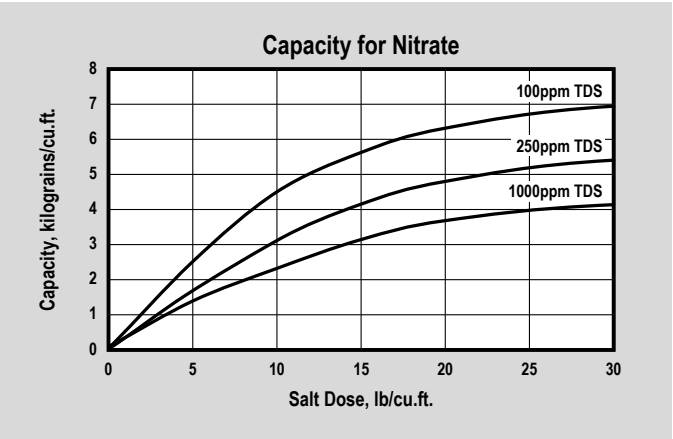


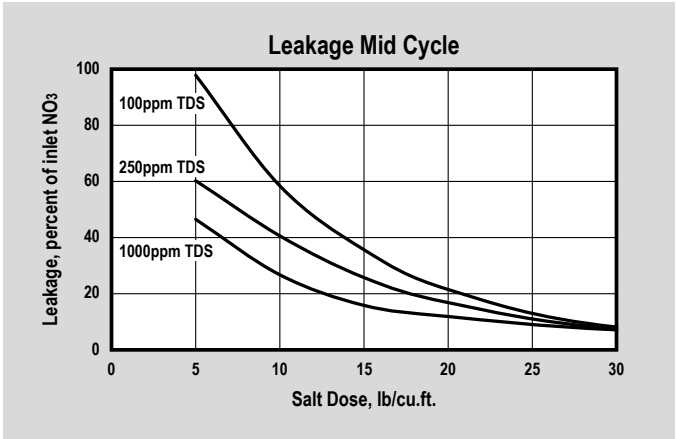
BACKWASH — *The graph above shows the expansion characteristics as a function of flow rate at various temperatures.*

APPLICATIONS

Nitrate Removal

ProSelect Nitrate is used in the chloride form to remove nitrates from potable water. It has a unique amine functional group that eliminates the possibility of nitrate dumping. ER20002 has reduced affinity for sulfate which provides high operating capacity and efficient regeneration. When treating waters with high hardness, the brine dilution and displacement waters should be softened and a low hardness salt used to prevent scaling.





CAPACITY AND LEAKAGE — *Capacity and leakage based on 10% NO_3 and 40% SO_4 in the feed and 35.7 ppm NO_3 endpoint (all as $CaCO_3$). Capacity and leakage are for nitrate alone. TDS is for total anions as $CaCO_3$. No engineering downgrade has been applied.*

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