

# GENERAL TECHNOLOGIES, SPC

## - High-Quality Services & Products

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### Technical Specifics – D890

#### Anion Exchange Resin - Nitrate Selective

#### Introduction

D890 is a macroporous type, strong basic anion ion exchange resin. For its specific manufacture art and functional group, D890 has excellent selectivity for removing nitrate and nitrite in the presence of  $SO_4^{2-}$ 、 $Cl^-$ 、 $HCO_3^-$  in water solution. Moreover, it has good anti-contaminate ability to low organic molecular in water because of its macroporous structure, in additional, it has perfect penetration resistance and strong mechanical strength. D890 is mainly used in water treatment and waste water treatment to reduce nitrogen amount with fast exchange speed and perfect operation performance.

#### D890 Chemical Specifics

Type	Anion Resin
Index	
Matrix	Styrene Series
Functional group	$-N+(CH_3)_3$
Ionic type	Cl
Total exchange capacity    mmol/g(≡)	≥2.9
Moisture content                    %	50~60
Shipping weight                    g/ml	0.72~0.85
True density (wet)                    g/ml	1.06~1.10
Mechanical strength                    %	≥90.0

#### Performance operation program

Operation	Solution	Flow rate(BV/h)	Dosage(BV)
Back wash	Pure water	2.0~4.0	1.5~2.0
Regenerate	8~10%NaCl solution	1.5~2.0	3.0~3.5

Replacement	Clean water	1.0~2.0	1.0~1.5
Eluting	Pure water	10~15	2.0~4.0
Operation	Tap water (input)	2.0~4.0	---

### Reference index

Resin bed height	m	$\geq 0.8$
Designed back wash space	%	$\geq 60$
Back wash expansion percent	%	50~85
Regenerate agent		NaCl
Regenerate agent density	%	6~8
Regenerate agent dosage	$\text{m}^3/\text{m}^3\text{-R}$	3.0~3.5
Regenerate contact time	min	50~70
Replacement time	min	30~50
Eluting flow rate	m/h	10~15
Operation temperature	$^{\circ}\text{C}$	30~60

### Storage of resin

1. The package for those unused resin should be in good condition, avoiding to expose resin directly to the air, keep the resin under the temperature of 0~40 $^{\circ}\text{C}$ .
2. For those resin hold in suspense during operation should avoid below situations:
  - (1) . Dehydration: The equipment should be full of water, if you need to discharge water, the equipment should hermetic closure in case of moisture loss of resin.
  - (2). Freezing: If the temperature is below 0 $^{\circ}\text{C}$  , the equipment should fill with salt solution to immerse resin.
  - (3) The growth of bacteria: The microbe like alga and bacteria may grow in those equipments which are not being used for a long time, and cause irreversible contamination of resin. The preventive measures should be complete back wash resin after the resin is effectiveness, removing suspended impurities and residue treated liquid and immerse with salt solution after the equipment is cleaning.