



# ANION EXCHANGE RESIN TOKEM-860

TR 2227-025-72285630-2011

Strong base anion exchange resin (gel type) with high chemical stability and mechanical strength.

It is produced in OH<sup>-</sup> form. Conversion to OH<sup>-</sup> form is not less than 95%. It contains minimum amounts of iron and chloride ions and organic compounds. Its high purity allows using the anion exchange resin for deep water demineralization.

## GENERAL DESCRIPTION

Matrix	styrene-DVB
Functional group	quaternary ammonium base groups (type 1)
Polymer structure	gel
Ionic form	OH <sup>-</sup> hydroxyl

### Application area:

Anion exchange resin TOKEM-860 can be applied in such processes as:

- process medium treatment
- deep water purification;
- production of ultrapure materials for food, health and pharmaceutical industries;
- separation and extraction of non-ferrous metals.

### Physical and Chemical Characteristics:

CHARACTERISTICS	STANDARD VALUE
Appearance	Spherical beads, light yellow to brown in colour
PARTICLE SIZE DISTRIBUTION	
Particle size range, mm	0.40-1.25
Volume of effective size fraction, % min	97
Effective particle size, mm max	0.6
Uniformity coefficient, max	1.6
Volume factor in OH <sup>-</sup> form, cm <sup>3</sup> /g	2.7-3.3
Osmotic stability, %, min	94
Total uncracked beads as shipped, %, min	97



Table con'd (Physical and Chemical Characteristics)

Total capacity, mmol/cm <sup>3</sup> (mg-eq/cm <sup>3</sup> ), min	1.20
Equilibrium static exchange capacity, mmol/cm <sup>3</sup> (mg-eq/cm <sup>3</sup> ), min	1.10
Dynamic exchange capacity with full regeneration, mmol/m <sup>3</sup> (g-eq/m <sup>3</sup> ), min	1050
Water product oxidation in oxygen equivalent, mg/l max	0.60
Iron mass fraction, % max	0.03
Mass fraction of chloride ions, mg/cm <sup>3</sup> , max	0.400
Alkali mass fraction, mmol/g, max	0.0005
Anion exchange resin content in CO <sub>3</sub> <sup>2-</sup> form, % max	6.0
Shipping weight, g/cm <sup>3</sup>	0.64-0.74
Particle density, g/cm <sup>3</sup>	1.06-1.10

**Processing Characteristics:**

**SUGGESTED OPERATING CONDITIONS AND MODES:**

Bed depth, mm min	800
Pressure drop coefficient, kPa·h/m <sup>2</sup>	1.35
Temperature limit, ° C in OH <sup>-</sup> form	60
pH limit	1-14
Swelling at Cl <sup>-</sup> → OH <sup>-</sup> , %	20
Regenerant, %	(3-4) NaOH
Total rinse requirement, BV	3-6
Backwashing bed expansion, %	80-100