



# ANION EXCHANGE RESIN TOKEM-840/95

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Strong base anion exchange resin (gel type) with uniform particle range composition and high purity.

The resin is manufactured in OH<sup>-</sup> form. Conversion to OH<sup>-</sup> form is not less than 95%. High monodispersity and the total absence of small fraction significantly decreases pressure drop across the bed height. This, in turn, enables high flow rates, enhancing regeneration effectiveness, reducing reagent and rinsing water requirements. Uniform particle range composition, compact bed packing, and no dead zones increase diffusion rate and contact area. These features improve ion exchange kinetics.

High osmotic stability of the anion exchange resin results in doubling its service life compared to that of polydispersed products.

## GENERAL DESCRIPTION

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

### Application area:

Monodispersed anion exchange resin TOKEM-840/95 can be applied in such processes as:

- deep water purification;
- separation of various elements;
- process media treatment;
- production of ultrapure substances in food, health and pharmaceutical industries.

### Physical and Chemical Characteristics:

CHARACTERISTICS	STANDARD VALUE
Appearance	Spherical beads, light yellow to brown in colour
PARTICLE SIZE DISTRIBUTION	
Mean particle size, mm	0.60±0.05



Table con'd (Physical and Chemical Characteristics)

Uniformity coefficient, max	1.1
Osmotic stability, %, min	91
Total uncracked beads as shipped, %, min	95
Total capacity, mmol/cm <sup>3</sup> (mg-eq/cm <sup>3</sup> ), min	1.1
Equilibrium static exchange capacity, mmol/cm <sup>3</sup> (mg-eq/cm <sup>3</sup> ), min	1.0
Dynamic exchange capacity with full regeneration, mmol/m <sup>3</sup> (g-eq/m <sup>3</sup> ), min	1000
Iron mass fraction, % max	0.03
Mass fraction of chloride ions, mg/cm <sup>3</sup> , max	0.40
Water product oxidation in oxygen equivalent, mg/dm <sup>3</sup> , max	0.5
Alkali mass fraction, mmol/g (mg-eq/g), max	0.0005
Anion exchange resin content in CO <sub>3</sub> <sup>2-</sup> form, %, max	5.0
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>	1.0
Temperature limit, ° C 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	2-4
Backwashing bed expansion, %	80-100