

CATION EXCHANGE RESIN TOKEM-160

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High capacity strong acid cation exchange resin (gel type). It is characterized with high chemical stability and mechanical strength. It is manufactured in H⁺ form. Conversion to H⁺ form is not less than 99%. It contains minimum amounts of iron and chloride ions and organic compounds. Its high purity allows using the cation exchange resin for deep water demineralization.

GENERAL DESCRIPTION	
Matrix	Styrene-DVB
Functional group	sulfonic group
Polymer structure	gel
Ionic form	OH ⁻ hydroxyl

Application area:

- deep water purification;
- separation of various elements;
- production of ultrapure materials for food, health and pharmaceutical industries.

Physical and Chemical Characteristics:

CHARACTERISTICS	STANDARD VALUE
Appearance	Spherical beads, yellow to dark brown in colour
PARTICLE SIZE DISTRIBUTION	
Particle size range, mm	0.40-1.25
Volume of effective size fraction, % min	98
Effective particle size, mm	0.45-0.65
Uniformity coefficient, max	1.6
Moisture retention, %	48-58
Osmotic stability, %, min	96
Total capacity, mmol/cm ³ (mg-eq/cm ³), min	1.9



Table con'd (Physical and Chemical Characteristics)

Hydrogen index, pH units min	4.5
Iron mass fraction, % max	0.03
Mass fraction of chloride ions, mg/cm ³ , max	0.0015
Water product oxidation in oxygen equivalent, mg/g max	0.5
Total uncracked beads as shipped, %, min	97
Dynamic exchange capacity with full regeneration, mmol/m ³ (g-eq/m ³), min	1600
Shipping weight, g/cm ³	0.75–0.80
Particle density, g/cm ³	1.17–1.25

Physical and Chemical Characteristics:

SUGGESTED OPERATING CONDITIONS AND MODES:

Bed depth, mm min	800
Pressure drop coefficient, kPa · h/m ²	1.35
Temperature limit, °C	120
pH limit	0–14
Swelling at H ⁺ → Na ⁺ , %	5–8
Regenerant, %	(1–1.5–3.0) H ₂ SO ₄ (4–5) HCl
Total rinse requirement, BV	3–5
Backwashing bed expansion, %	50–80