

## CATION EXCHANGE RESIN TOKEM-100-10

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High capacity strong acid cation exchange resin with improved particle range composition. Increased content of crosslinking agent provides for higher toughness, exchange capacity and osmotic stability of the resin. These features enable it to operate with more frequent regeneration compared to an ordinary cation exchange resin.

GENERAL DESCRIPTION	
Matrix	Styrene-DVB
Functional group	Sulfonic acid
Polymer structure	gel
Ionic form	H <sup>+</sup> Hydrogen Na <sup>+</sup> Sodium

### Application area:

The cation exchange resin can be applied in all conventional ion exchange processes, including:

- softening and demineralizing water treatment systems with co-current regeneration;
- condensate polishing.

### Physical and Chemical Characteristics:

CHARACTERISTICS	STANDARD VALUE	
Appearance	Spherical beads, yellow to dark brown	
Ionic form	H <sup>+</sup>	Na <sup>+</sup>
Particle size range, mm	0.40-1.25	
Uniformity coefficient, max	1.6	
Volume of effective size fraction, % min	98	
Effective particle size, mm max	0.40-0.55	
Moisture retention, %	45-51	41-45
Osmotic stability, %, min	98	
Total uncracked beads as shipped, %, min	90	
Total capacity, mmol/cm <sup>3</sup> (mg-eq/cm <sup>3</sup> ), min	2.0	2.1
Shipping weight, g/cm <sup>3</sup>	0.75-0.82	0.80- 0.85
Particle density, g/cm <sup>3</sup>	1.17-1.25	1.25-1.29



**Processing Characteristics:**

<b>SUGGESTED OPERATING CONDITIONS AND MODES:</b>	
Bed depth min, mm	800
Pressure drop coefficient, kPa · h/m <sup>2</sup>	1.35
Temperature limit, °C	120
pH limit	0-14
Swelling at H <sup>+</sup> → Na <sup>+</sup> , %	3-6
Regenerant, %	
H <sup>+</sup> form	(1-1.5-3.0) H <sub>2</sub> SO <sub>4</sub> (4-5) HCl
Na <sup>+</sup> form	(6-10) NaCl
Total rinse requirement, BV	3-5
Backwashing bed expansion, %	50-80