



# CATION EXCHANGE RESIN TOKEM-200

TR-2227-019-72285630-2009

Weak acid cation exchange resin (porous type) with improved particle range composition and osmotic stability. It is characterized with high total and dynamic exchange capacities.

GENERAL DESCRIPTION	
Matrix	acryl-DVB
Functional group	carboxyl group
Polymer structure	macroporous
Ionic form	H <sup>+</sup> Hydrogen Na <sup>+</sup> Sodium

## Application area:

- removal of bicarbonate water hardness;
- selective removal of iron and other bivalent metals (copper, nickel, zinc);
- in combination with a strong acid cation exchange resin for cation removal;
- as a buffer membrane prior to a strong acid cation exchange resin;
- purification, extraction, concentration and selection of substances in various industries.

## Physical and Chemical Characteristics:

CHARACTERISTICS	STANDARD VALUE	
Appearance	Spherical opaque beads white to light yellow	
Ionic form	H <sup>+</sup>	Na <sup>+</sup>
Particle size range, mm	0.315-1.600	
Uniformity coefficient, max	1.6	
Effective size fraction proportion, % min	98	
Effective particle size, mm max	0.4-0.6	
Moisture retention, %	45-55	55-65
Osmotic stability, %, min	98	
Total uncracked beads as shipped, %, min	95	
Total capacity, mmol/cm <sup>3</sup> (mg-eq/cm <sup>3</sup> ), min	4.3	
Dynamic exchange capacity with regenerant requirement target, mmol/m <sup>3</sup> (g-eq/m <sup>3</sup> ), min	2300	



Table con'd (Physical and Chemical Characteristics)

Mean mechanical toughness, g/bead, min	300	
Particles with toughness below 200 g/bead, %, max	10	
Shipping weight, g/cm <sup>3</sup>	0.74-0.80	0.78-0.88
Particle density, g/cm <sup>3</sup>	1.14-1.20	1.20-1.25

**Processing Characteristics:**

SUGGESTED OPERATING CONDITIONS AND MODES:	
Bed depth min, mm	600
Temperature limit, ° C	120
pH limit	5-14
Swelling at: H <sup>+</sup> → Na <sup>+</sup> H <sup>+</sup> → Ca <sup>+</sup> , %	40-60 7
Regenerant, % H <sup>+</sup> form	(0.3-0.8) H <sub>2</sub> SO <sub>4</sub> (4-5) HCl
Total rinse requirement, BV	3-5
Backwashing bed expansion, %	80-100