



## CATION EXCHANGE RESIN TOKEM-105-10 NR

TR 2227-042-72285630-2015

Strong acid nuclear class cation exchange resin (gel type).

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

### Application area (according to Standard Protocol RD EO 1.1.2.25.0161-2009 and Industrial Standard STO 1.1.1.02.013.0715-2009):

- for using in cation exchange filters of special water treatment SVO-1 in SCWR reactors;
- for using in cation exchange filters of special water treatment SVO-2,4,6 (boron concentrate treatment) in SCWR reactors;
- for using in nonregenerable cation exchange filters of special water treatment SVO in LWGR reactors;
- for using in nonregenerable mix bed filters of special water treatment SVO-1 in SCWR reactors together with anion exchange resin TOKEM-805 NR;
- for using in nonregenerable mix bed filters of special water treatment SVO in LWGR reactors together with anion exchange resin TOKEM-805 NR.

### Physical and Chemical Characteristics: (and Industrial Standard STO 1.1.1.07.003.0368-2011):

CHARACTERISTICS	STANDARD VALUE
Appearance	Spherical beads, yellow to dark brown in colour
Particle size range, mm	0.40-1.25
Volume of effective size fraction, % min	98
Total uncracked beads as shipped, %, min	97
Osmotic stability, %, min	94
Moisture retention, %	45-51
Total capacity, mmol/cm <sup>3</sup> (mg-eq/cm <sup>3</sup> ), min	2.0
Water product oxidation in oxygen equivalent, mg/g max	0.5
Mass fraction of chloride ions, mg/cm <sup>3</sup> , max	0.01



Table con'd (Physical and Chemical Characteristics)

Mean mechanical toughness, g/bead, min	400
Beads with toughness below 200 g/bead, %, max	5
Difference between settling times of anion and cation resins, sec, max	6
Electrostatic coefficient, % max	15