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PRODUCT SPECIFICATION SHEET

Product Name: TSKgel® SP-5PW (strong cation exchange resin)

G5000 PW

— **-O-CH₂-CH₂-CH₂-SO₃**

Part Numbers:

43382	TSKgel SP-5PW (20), 25 mL
14714	TSKgel SP-5PW (20), 250 mL
14715	TSKgel SP-5PW (20), 1 L
18435	TSKgel SP-5PW (20), 5 L
43282	TSKgel SP-5PW (30), 25 mL
14716	TSKgel SP-5PW (30), 250 mL
14717	TSKgel SP-5PW (30), 1 L
18384	TSKgel SP-5PW (30), 5 L

Product Description: TSKgel is a methacrylic polymer incorporating very high mechanical and chemical stability. Resins are available as non-functionalised “G-PW” series resins for size exclusion separations, and derivatised with surface chemistries for alternative modes of chromatography such as ion exchange, hydrophobic interaction or affinity separations.

TSKgel SP-5PW chromatographic resin is designed for ion exchange chromatography. This chromatographic mode separates molecules on the basis of ionic interactions between the sample and the resin. The separation is usually accomplished in buffered aqueous solution with a gradient of increasing ionic strength. Alternatively, pH adjustment may be used for control of elution.

Formulation: Particulate resin (spherical), available in particle sizes (mean diameter):
 20 µm = 5PW 20
 30 µm = 5PW 30
 Supplied as slurry in 20 % ethanol (v/v).

Physicochemical Specifications:

▪ Appearance	White resin slurry which settles upon standing
▪ Particle Size Distribution (>80 % within range)	20 – 40 µm for TSKgel SP-5PW 30 15 – 25 µm for TSKgel SP-5PW 20
▪ Exclusion Limit	5 x10 ⁶ Dalton (globular protein)
▪ Mean Pore Diameter	1000 Å
▪ Pressure drop across the column	max. 20 bar (recommended)
▪ Operating Linear Flowrate	normally 60 – 1200 cm/hour (depending on particle size)
▪ Ion Exchange Capacity	0.09 ± 0.03 meq/mL
▪ Protein Adsorption Capacity	30 ± 10 mg/mL (Lysozyme)
▪ Bacterial Count	≤ 100 CFU/mL
▪ Endotoxin Concentration	≤ 10.0 endotoxin units/mL
▪ Pack sizes and type	25 mL, 250 mL, 1 L, 5 L Packed in virgin Polyethylene container with Polypropylene cap.
▪ Resin Volume per Container	The indicated volume is the settled resin volume.

▪ Shipping Solvent	72 % (v/v) slurry in 20 % (v/v) ethanol
▪ Long Term Storage Conditions	20 % (v/v) ethanol
▪ Cleaning in Place / Sanitization	0.5 M NaOH or 0.1 M HCl
▪ Foreign Substance	not observed, no visual evidence
▪ Eluable Matter	< 0.1 %
▪ Shelf Life Stability	Minimum 5 years

For detailed test procedures please refer to Technical Support Group