

TSK-GEL® SP-5PW Resins

(strong cation exchange chromatography resins)



G5000-PW

O-R'-O-CH₂-CH₂-CH₂-SO₃⁻

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

Product Description

TSK-GEL chromatographic resins are comprised of a methacrylic polymer incorporating high mechanical and chemical stability. Resins are available as non-functionalized "G-PW" series resins for size exclusion separations, and derivatized with surface chemistries for alternative modes of chromatography such as ion exchange, hydrophobic interaction or affinity separations.

TSK-GEL SP-5PW chromatographic resins are designed for cation 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

72% (v/v) slurry in 20% (v/v) ethanol

This sheet contains the suggested operating conditions and specification ranges for TSK-GEL SP-5PW resins. Lot-specific specifications are included in the Certificate of Analysis (C of A) shipped with the product.

A. OPERATING CONDITIONS

Pressure Drop Across the Column	max. 2.0 MPa (recommended)
Operating Linear Flow Rate	normally 60 – 1200 cm/hour (depending on particle size)
Cleaning in Place/Sanitization	0.5mol/L NaOH or 0.1mol/L HCl
Long Term Storage Conditions	20% (v/v) ethanol (shipping solvent)

B. SPECIFICATIONS

Appearance	White resin slurry which settles upon standing
Particle Size Distribution (>80% within range)	15 – 25µm for TSK-GEL SP-5PW (20) resins 20 – 40µm for TSK-GEL SP-5PW (30) resins
Mean Pore Diameter	100 nm
Exclusion Limit (base resin)	5 x 10 ⁶ Dalton (globular protein)
Ion Exchange Capacity	0.09 ± 0.03 eq/L
Protein Adsorption Capacity	30 ± 10 g/L (Lysozyme)
Bacterial Count	≤ 100 CFU/mL
Endotoxin Concentration	≤ 10.0 endotoxin units/mL
Resin Volume per Container	The indicated volume is the settled resin volume.
Foreign Substance	not observed, no visual evidence
Eluable Matter	≤ 0.2%
Shelf Life Stability	Minimum 10 years