

**RESIN INFORMATION SHEET**

Product Name	TSKgel® SP-3PW (30) (Strong cation exchange chromatography resin)	
Part Numbers	0021976	TSKgel SP-3PW (30), 25 mL
	0021977	TSKgel SP-3PW (30), 250 mL
	0021978	TSKgel SP-3PW (30), 1 L
	0021979	TSKgel SP-3PW (30), 5 L

Product Description TSKgel is a methacrylic polymer with very high mechanical and chemical stability.

TSKgel SP-3PW chromatographic resin is designed for ion exchange chromatography, especially for insulin purification. 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.

Operating Conditions	Packing pressure	Typically 1 MPa
	Shipping solvent	20 % (v/v) ethanol
	Shipping formulation	72 % (v/v) slurry in shipping solvent (*)
	Pressure limiting factor	Depend on column hardware (typically 2 MPa)
	Operating linear flowrate	Typically 60 - 1200 cm/hour (depend on particle size)
	Long term storage conditions	20 % (v/v) ethanol
	Cleaning in place / sanitization	0.1 - 0.5 mol/L NaOH or 0.1 mol/L HCl

Specifications	Particle size distribution (Min. 90 % within range)	20 - 40 µm for (30)-grade
	Ion exchange capacity	0.07 - 0.22 eq/L
	Insulin adsorption capacity	Min. 65 g/L
	Bacterial count	Max. 100 CFU/mL
	Endotoxin concentration	Max. 10.0 EU/mL
	Eluable matter	Max. 0.2 % (for dry gel)
	Foreign substance (colored particle)	Max. 6

Additional Information	Appearance	White resin slurry which settles upon standing
	Mean pore diameter (base resin)	25 nm (*)

(*) The value is for reference only, not guaranteed.

Lot-specific data are included in the Certificate of Analysis (COA) shipped with the product. For detailed test procedures please refer to the appropriate Regulatory Support File.