



## RESIN INFORMATION SHEET

**Product Name** TOYOPEARL® Sulfate-650F  
(Salt-tolerant strong cation exchange chromatography resin)

<b>Part Numbers</b>	0023467	TOYOPEARL Sulfate-650F, 100 mL
	0023468	TOYOPEARL Sulfate-650F, 250 mL
	0023469	TOYOPEARL Sulfate-650F, 1 L
	0023470	TOYOPEARL Sulfate-650F, 5 L
	0023471	TOYOPEARL Sulfate-650F, 50 L

**Product Description** TOYOPEARL chromatographic resins are based on a rigid methacrylic polymer, resulting in high mechanical and chemical stability. Resins are available as non-functionalized “HW” 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.

TOYOPEARL Sulfate-650F is a strong cation exchange chromatographic resin that exhibits high salt tolerance. Ion exchange 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 to control elution.

<b>Operating Conditions</b>	Packing pressure	Typically 0.3 MPa
	Shipping solvent	20 % (v/v) ethanol containing 0.2 mol/L sodium acetate
	Shipping formulation	72 % (v/v) slurry in shipping solvent (*)
	Pressure limiting factor	Depend on column hardware (typically 0.7 MPa)
	Operating linear flowrate	Typically 10 - 600 cm/hour
	Long-term storage conditions	20 % (v/v) ethanol containing 0.2 mol/L sodium acetate (shipping solvent)
	Cleaning-in-place/Sanitization	0.1 - 0.5 mol/L NaOH or acidic solutions. Note: acidic solutions with pH < 3 are not recommended as cleaning solvent.

<b>Specifications</b>	Particle size distribution (min. 80 % within range)	30 - 60 µm
	Ion exchange capacity	Min. 0.53 eq/L
	Protein adsorption capacity (of human IgG)	Min. 114 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

<b>Additional Information</b>	Appearance	White resin slurry which settles upon standing
	Mean pore diameter (base resin)	100 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.