## **RESIN INFORMATION SHEET**

Product Name	TOYOPEARL® Butyl-650 (Hydrophobic interaction chromatography resin)		
Part Numbers	0043153	TOYOPEARL Butyl-650S, 2	5 mL
	0007476	TOYOPEARL Butyl-650S, 1	00 mL
	0014701	TOYOPEARL Butyl-650S, 1	L
	0007975	TOYOPEARL Butyl-650S, 5	L
	0018826	TOYOPEARL Butyl-650S, 5	0 L
	0019802	TOYOPEARL Butyl-650M, 2	5 mL
	0007477	TOYOPEARL Butyl-650M, 1	00 mL
	0014702	TOYOPEARL Butyl-650M, 1	L
	0007976	TOYOPEARL Butyl-650M, 5	L
	0018355	TOYOPEARL Butyl-650M, 5	0 L
	0043127	TOYOPEARL Butyl-650C, 2	5 mL
	0007478	TOYOPEARL Butyl-650C, 1	00 mL
	0014703	TOYOPEARL Butyl-650C, 1	L
	0007977	TOYOPEARL Butyl-650C, 5	L
	0022826 TOYOPEARL Butyl-650C, 50 L		
Product Description	<b>TOYOPEARL</b> 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.		
	chromatographic n	node separates molecules on th	re designed for hydrophobic interaction chromatography. This he basis of hydrophobic interactions between the sample and the
	strength.	icion is usually accomplished in	buffered aqueous solution with a gradient of decreasing ionic
Operating	•	· ·	Typically 0.3 MPa
Operating Conditions	strength.	· ·	
	strength.  Packing pressure		Typically 0.3 MPa
	Packing pressure Shipping solvent	tion	Typically 0.3 MPa 20 % (v/v) ethanol
	Packing pressure Shipping solvent Shipping formula	tion factor	Typically 0.3 MPa  20 % (v/v) ethanol  72 % (v/v) slurry in shipping solvent (*)
	Packing pressure Shipping solvent Shipping formula Pressure limiting	tion factor flowrate	Typically 0.3 MPa  20 % (v/v) ethanol  72 % (v/v) slurry in shipping solvent (*)  Depend on column hardware (typically 0.7 MPa)
	Shipping solvent Shipping formula Pressure limiting Operating linear	tion factor flowrate ge conditions	Typically 0.3 MPa  20 % (v/v) ethanol  72 % (v/v) slurry in shipping solvent (*)  Depend on column hardware (typically 0.7 MPa)  Typically 10 - 600 cm/hour
	Packing pressure Shipping solvent Shipping formula Pressure limiting Operating linear Long-term storag	tion factor flowrate ge conditions e/Sanitization	Typically 0.3 MPa  20 % (v/v) ethanol  72 % (v/v) slurry in shipping solvent (*)  Depend on column hardware (typically 0.7 MPa)  Typically 10 - 600 cm/hour  20 % (v/v) ethanol
Conditions	Packing pressure Shipping solvent Shipping formula Pressure limiting Operating linear Long-term storag Cleaning-in-place Particle size distr (min. 80 % w	tion factor flowrate ge conditions e/Sanitization	Typically 0.3 MPa  20 % (v/v) ethanol  72 % (v/v) slurry in shipping solvent (*)  Depend on column hardware (typically 0.7 MPa)  Typically 10 - 600 cm/hour  20 % (v/v) ethanol  0.1 - 0.5 mol/L NaOH or 0.1 mol/L HCl  20 - 50 µm for S-grade 40 - 90 µm for M-grade
Conditions	Packing pressure Shipping solvent Shipping formula Pressure limiting Operating linear Long-term storag Cleaning-in-place Particle size distr (min. 80 % w	tion factor flowrate ge conditions e/Sanitization ribution ithin range)	Typically 0.3 MPa  20 % (v/v) ethanol  72 % (v/v) slurry in shipping solvent (*)  Depend on column hardware (typically 0.7 MPa)  Typically 10 - 600 cm/hour  20 % (v/v) ethanol  0.1 - 0.5 mol/L NaOH or 0.1 mol/L HCl  20 - 50 µm for S-grade 40 - 90 µm for M-grade 50 - 150 µm for C-grade
Conditions	Packing pressure Shipping solvent Shipping formula Pressure limiting Operating linear Long-term storag Cleaning-in-place Particle size distr (min. 80 % w Protein adsorption	tion factor flowrate ge conditions e/Sanitization ribution ithin range) on capacity (of lysozyme)	Typically 0.3 MPa  20 % (v/v) ethanol  72 % (v/v) slurry in shipping solvent (*)  Depend on column hardware (typically 0.7 MPa)  Typically 10 - 600 cm/hour  20 % (v/v) ethanol  0.1 - 0.5 mol/L NaOH or 0.1 mol/L HCl  20 - 50 µm for S-grade 40 - 90 µm for M-grade 50 - 150 µm for C-grade 30 - 50 g/L
Conditions	Packing pressure Shipping solvent Shipping formula Pressure limiting Operating linear Long-term storag Cleaning-in-place Particle size distr (min. 80 % w Protein adsorptic Bacterial count	tion factor flowrate ge conditions e/Sanitization ribution ithin range) on capacity (of lysozyme)	Typically 0.3 MPa  20 % (v/v) ethanol  72 % (v/v) slurry in shipping solvent (*)  Depend on column hardware (typically 0.7 MPa)  Typically 10 - 600 cm/hour  20 % (v/v) ethanol  0.1 - 0.5 mol/L NaOH or 0.1 mol/L HCl  20 - 50 µm for S-grade 40 - 90 µm for M-grade 50 - 150 µm for C-grade 30 - 50 g/L  Max. 100 CFU/mL  Max. 10.0 EU/mL
Conditions	Packing pressure Shipping solvent Shipping formula Pressure limiting Operating linear Long-term storag Cleaning-in-place Particle size distr (min. 80 % w Protein adsorptic Bacterial count Endotoxin concer Eluable matter	tion factor flowrate ge conditions e/Sanitization ribution ithin range) on capacity (of lysozyme)	Typically 0.3 MPa  20 % (v/v) ethanol  72 % (v/v) slurry in shipping solvent (*)  Depend on column hardware (typically 0.7 MPa)  Typically 10 - 600 cm/hour  20 % (v/v) ethanol  0.1 - 0.5 mol/L NaOH or 0.1 mol/L HCl  20 - 50 µm for S-grade 40 - 90 µm for M-grade 50 - 150 µm for C-grade 30 - 50 g/L  Max. 100 CFU/mL
Conditions  Specifications	Packing pressure Shipping solvent Shipping formula Pressure limiting Operating linear Long-term storag Cleaning-in-place Particle size distr (min. 80 % w Protein adsorptic Bacterial count Endotoxin concer Eluable matter	tion factor flowrate ge conditions e/Sanitization  ribution ithin range) on capacity (of lysozyme)	Typically 0.3 MPa  20 % (v/v) ethanol  72 % (v/v) slurry in shipping solvent (*)  Depend on column hardware (typically 0.7 MPa)  Typically 10 - 600 cm/hour  20 % (v/v) ethanol  0.1 - 0.5 mol/L NaOH or 0.1 mol/L HCl  20 - 50 µm for S-grade 40 - 90 µm for M-grade 50 - 150 µm for C-grade 30 - 50 g/L  Max. 100 CFU/mL  Max. 10.0 EU/mL  Max. 0.2 % (for dry gel)
Conditions	Packing pressure Shipping solvent Shipping formula Pressure limiting Operating linear Long-term storag Cleaning-in-place Particle size distr (min. 80 % w Protein adsorptic Bacterial count Endotoxin concer Eluable matter	tion factor flowrate ge conditions e/Sanitization  ribution ithin range) on capacity (of lysozyme)	Typically 0.3 MPa  20 % (v/v) ethanol  72 % (v/v) slurry in shipping solvent (*)  Depend on column hardware (typically 0.7 MPa)  Typically 10 - 600 cm/hour  20 % (v/v) ethanol  0.1 - 0.5 mol/L NaOH or 0.1 mol/L HCl  20 - 50 µm for S-grade 40 - 90 µm for M-grade 50 - 150 µm for C-grade 30 - 50 g/L  Max. 100 CFU/mL  Max. 10.0 EU/mL  Max. 0.2 % (for dry gel)

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.

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