



RESIN INFORMATION SHEET

Product Name TOYOPEARL® HW-55
(Size exclusion chromatography resin)

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| Part Numbers | 0019813 | TOYOPEARL HW-55S, 150 mL |
| | 0007459 | TOYOPEARL HW-55S, 250 mL |
| | 0007456 | TOYOPEARL HW-55S, 500 mL |
| | 0014686 | TOYOPEARL HW-55S, 1 L |
| | 0008062 | TOYOPEARL HW-55S, 5 L |
| | 0019812 | TOYOPEARL HW-55F, 150 mL |
| | 0007457 | TOYOPEARL HW-55F, 500 mL |
| | 0014687 | TOYOPEARL HW-55F, 1 L |
| | 0008063 | TOYOPEARL HW-55F, 5 L |
| | 0021918 | TOYOPEARL HW-55F, 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 HW-55 chromatographic resin is designed for aqueous size exclusion chromatography (also known as gel filtration chromatography). This chromatographic mode separates molecules on the basis of molecular hydrodynamic radius. These resins possess controlled pore distribution such that molecules with dynamic radii smaller than the pores diffuse throughout the accessible volume of the bead and are thus separated from larger molecules that are excluded from smaller pores. The separation is normally accomplished in aqueous solution of moderate ionic strength (100 - 300mM) to reduce interaction with residual negative charges on the matrix.

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| Operating Conditions | Packing pressure | Typically 0.3 MPa |
| | Shipping solvent | 20 % (v/v) ethanol |
| | 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 |
| | Cleaning-in-place/Sanitization | 0.1 - 0.5 mol/L NaOH or 0.1 mol/L HCl |

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| Specifications | Particle size distribution (min. 80 % within range) | 20 - 40 µm for S-grade 30 - 60 µm for F-grade |
| | Exclusion limit (MW of PEO) | (1.05 - 1.95) x 10 ⁵ |
| | 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) | Unobserved |

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| Additional Information | Appearance | White resin slurry which settles upon standing |
| | Mean pore diameter (base resin) | 50 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.