

# TSK-GEL® G3000SW Products

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| <b>Part Numbers:</b> | 05789, 7.5mm ID x 30cm, 10µm<br>05103, 7.5mm ID x 60cm, 10µm<br>06728, 21.5mm ID x 30cm, 13µm<br>05147, 21.5mm ID x 60cm, 13µm<br>08800, 8.0mm ID Glass x 30cm, 10µm | 05371, Guard Column for P/N 05789 & 05103<br>05758, Guard Column for P/N 06728 & 05147<br>08805, Guard Column for P/N 08800<br>06819, TSKgel SW top-off gel, 1g wet gel |
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This sheet contains the recommended operating conditions and the specifications for TSK-GEL G3000SW columns. Installation instructions and column care information are described in a separate Instruction Manual.

| <b>A. OPERATING CONDITIONS</b>   |   |
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| 1. Shipping Solvent:   | 0.05% NaN <sub>3</sub> and 0.1M Na <sub>2</sub> SO <sub>4</sub> in 0.1M phosphate buffer, pH 6.7  |
| 2. Max. Flow Rate:   | 0.8mL/min (8.0mm ID Glass)<br>1.2mL/min (7.5mm ID)<br>8.0mL/min (21.5mm ID)<br><br>When a buffer with high viscosity is used, the maximum flow rate may have to be reduced so as not to exceed the maximum pressure drop. When changing solvents, use a flow rate equal to 25% of the maximum flow rate.  |
| 3. Standard Flow Rate:   | 0.4 - 0.8mL/min (8.0mm ID Glass)<br>0.5 - 1.0mL/min (7.5mm ID)<br>3.0 - 6.0mL/min (21.5mm ID)   |
| 4. Max. Pressure:  | 1.5MPa (21.5mm ID x 30cm)<br>2MPa (8.0mm ID Glass x 30cm)<br>2.5MPa (7.5mm ID x 30cm)<br>3MPa (21.5mm ID x 60cm)<br>5MPa (7.5mm ID x 60cm)  |
| 5. pH Range:   | 2.5 - 7.5   |
| 6. Salt Conc.:   | < 0.5 Molar   |
| 7. Organic Conc.:  | 0 - 100% for aqueous soluble organic solvents. Make gradual solvent changes using a shallow gradient at low flow rate.  |
| 8. Temperature:  | 10 - 30°C, Reduce flow rate when operating below 10°C.  |
| 9. Cleaning Solvents:  | (1) conc. salt solution at low pH, e.g. 0.5M Na <sub>2</sub> SO <sub>4</sub> , pH 2.7<br>(2) methanol or acetonitrile in low conc. aqueous buffer<br>(3) buffered solution of urea or guanidine<br><br><b>NOTE:</b> Choose a cleaning solvent based on sample properties, e.g. use (1) to remove basic proteins, and (2) to remove hydrophobic proteins. Chaotropic agents can solvate strongly adsorbed proteins, e.g. via hydrogen bonding. |
| 10. Storage:   | Store the column in mobile phase containing 0.05% NaN <sub>3</sub> or 20% ethanol when it will not be used the next day. For overnight storage flush the column with mobile phase at low flow rate. Prevent air from entering the column!   |
| 11. Column Protection:   | The use of guard columns is recommended to prolong the life of the analytical column. Guard column life depends greatly on sample cleanliness. As a general rule, guard columns should be replaced after every 30-40 sample injections, when the peaks become excessively wide, or when the peaks show splitting.   |
| 12. TSKgel SW top-off gel:   | Occasionally due to accident, sample, mobile phase, or operational variables, a depression can develop at the column or guard column inlet. Use TSKgel SW top-off gel SW for filling in such voids.   |
| <b>B. SPECIFICATIONS</b>   |   |
| The performance of TSK-GEL G3000SW columns is tested under the conditions described in the Data Sheet. All columns have passed the following quality control specifications: |   |
| 1. Number of Theoretical Plates (N):   | ≥10,000 (30cm columns)<br>≥ 20,000 (60cm columns)   |
| 2. Asymmetry Factor (AF):  | 0.7 - 1.6   |

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