TSKgel® COLUMN SELECTION GUIDE FOR POLYMER ANALYSIS

WHAT TYPE OF SOLVENT IS BEING USED?

Organic only

Is the System being used Semi-Micro

Yes, the use of 15 cm columns will save time and offers optimal efficiency

Columns with a broad or narrow molar mass range

Mixed bed columns

No solvent exchange possible
- THF only
- TSKgel SuperMultiporeHZ series

One solvent exchange possible
- Organic solvents see list 1
- TSKgel SuperHZ series

Multiple solvent exchanges possible
- Organic solvents see list 2
- TSKgel SuperH series

Single pore columns

One solvent exchange possible
- Organic solvents see list 1
- TSKgel SuperHZ series

Multiple solvent exchanges possible
- Organic solvents see list 2
- TSKgel SuperH series

No, the use of 30 cm columns is ideal

Columns with a broad or narrow molar mass range

Mixed bed columns

One solvent exchange possible
- Organic solvents see list 1
- TSKgel HXL series

Multiple solvent exchanges possible
- Organic solvents see list 2
- TSKgel HHR series
- TSKgel HT and HT2 series

Single pore columns

One solvent exchange possible
- Organic solvents see list 1
- TSKgel HXL series

Multiple solvent exchanges possible
- Organic solvents see list 2
- TSKgel HHR series
- TSKgel HT2 series

APPLICABLE MOLAR MASS RANGE

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APPLICABLE MOLAR MASS RANGE

Aqueous or organic

Is the System being used Semi-Micro

Yes, the use of 15 cm columns will save time and offers optimal efficiency

Columns with a broad or narrow molar mass range

- Mixed bed columns
- Single pore columns
- Mixed bed columns
- Single pore columns

100% aqueous to 100% organic solvents - see list 3

- TSKgel SuperAW series
- TSKgel Alpha series

APPLICABLE MOLAR MASS RANGE

APPLICABLE MOLAR MASS RANGE

No, the use of 30 cm columns is ideal

Columns with a broad or narrow molar mass range

- Mixed bed columns
- Single pore columns
- Mixed bed columns
- Single pore columns

100% aqueous to 100% organic solvents - see list 3

- TSKgel SuperAW series
- TSKgel Alpha series

APPLICABLE MOLAR MASS RANGE

APPLICABLE MOLAR MASS RANGE

Aqueous only

Is the System being used Semi-Micro

Yes, the use of 15 cm columns will save time and offers optimal efficiency

Columns with a broad or narrow molar mass range

Mixed bed columns

100% aqueous to 20% organic solvents - see list 4

- TSKgel SuperMultiporePW series
- TSKgel PW series
- TSKgel PWXL series

Single pore columns

100% aqueous to 20% organic solvents - see list 4

- Analysis of cationic polymers
- TSKgel PW series
- TSKgel PWXL-CP series
- TSKgel PWXL series

APPLICABLE MOLAR MASS RANGE

No, the use of 30 cm columns is ideal

Columns with a broad or narrow molar mass range

Mixed bed columns

100% aqueous to 20% organic solvents - see list 4

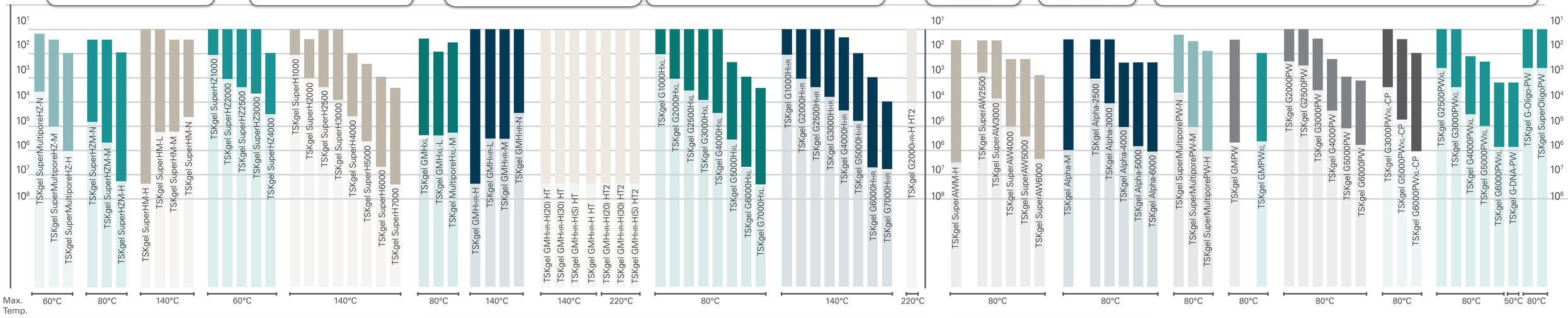
- TSKgel SuperMultiporePW series
- TSKgel PW series
- TSKgel PWXL series

Single pore columns

100% aqueous to 20% organic solvents - see list 4

- Analysis of cationic polymers
- TSKgel PW series
- TSKgel PWXL-CP series
- TSKgel PWXL series

APPLICABLE MOLAR MASS RANGE



List 1: Shipping solvent of tetrahydrofuran can be replaced with: benzene, chloroform, toluene, xylene, dichloromethane or dischloroethane.
Shipping solvent of acetone can be replaced with: carbon tetrachloride, *o*-dichlorobenzene, dimethylformamide, dodecane, dimethyl sulfoxide, dioxane, ethylacetate, FC-113, hexane, pyridine, hexafluoroisopropanol/chloroform, methyl ethyl ketone, quinolone or cyclohexane.
Shipping solvent of chloroform can be replaced with: *m*-cresol in chloroform or up to 10% hexafluoroisopropanol/chloroform.
Shipping solvent of dimethylformamide can be replaced with: dimethyl sulfoxide, dioxane, tetrahydrofuran or toluene.
Shipping solvent of *o*-dichlorobenzene can be replaced with: 1-chloronaphthalene or trichlorobenzene.

List 2: Shipping solvent of tetrahydrofuran can be replaced with: acetone, ethanol, quinolone, benzene, *o*-dichlorobenzene, ethyl acetate, dodecane, FC-113, carbon tetrachloride, dichloromethane, dichloroethane, *n*-hexane, cyclohexane, xylene, tetrahydrofuran, chloroform, 1,4-dioxane, hexafluoroisopropanol, toluene, 1-chloronaphthalene, N,N-dimethylacetoacetamide, methyl ethyl ketone, trichlorobenzene, *m*-cresol, dimethylformamide, methylpyrrolidone, *o*-chlorophenol/chloroform, dimethyl sulfoxide, and pyridine.

*Shipping solvent of *o*-dichlorobenzene can be replaced with: 1-chloronaphthalene or trichlorobenzene for high temperature GPC analysis.

List 3: Shipping solvent of water can be replaced with: aqueous buffers, methanol, ethanol, tetrahydrofuran, dimethylformamide, hexafluoroisopropanol, dimethyl sulfoxide, 2-propanol, and acetonitrile.

Applicable molar mass range determined based on polystyrene calibration curves.

List 4: Shipping solvent of water can be replaced with: aqueous buffers with up to 20% methanol, ethanol, propanol, acetonitrile, dimethylformamide, dimethyl sulfoxide, formic acid, and acetic acid and up to 50% acetone.

Applicable molar mass range determined based on polystyrene calibration curves.

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