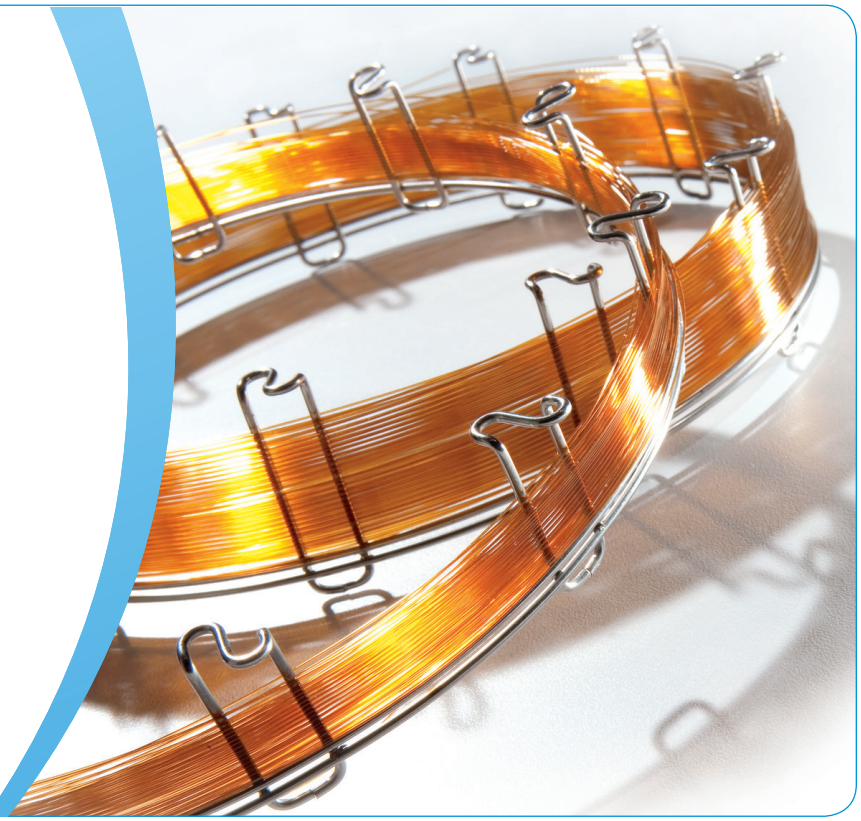
Rxi GC Columns

Leverage the outstanding inertness, low bleed, and high reproducibility of Rxi® 3-in-1 technology to gain:

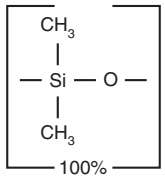
- Accurate Data
- The Right Results Fast
- Maximized Instrument Uptime

RESTEK Pure Chromatography www.restek.com/rxi

Rxi GC Columns



Rxi®-1ms Structure



Similar to: (100%-methyl)-polysiloxane

similar phases

HP-1ms, HP-1msUI, DB-1ms, DB-1msUI, Ultra-1, VF-1ms, ZB-1, ZB-1ms

Stringent quality testing ensures consistent performance, column to column and injection to injection.

Rxi®-1ms Columns (fused silica)

(nonpolar phase; Crossbond® dimethyl polysiloxane)

- General-purpose columns for arson accelerants, essential oils, hydrocarbons, pesticides, PCB congeners (e.g., Aroclor mixes), sulfur compounds, amines, solvent impurities, simulated distillation, oxygenates, gasoline range organics (GRO), refinery gases.
- Tested and guaranteed for ultra-low bleed; improved signal-to-noise ratio for better sensitivity and mass spectral integrity.
- Temperature range: -60 °C to 330/350 °C.
- Equivalent to USP G1, G2, and G38 phases.

ID	df	temp. limits	15-Meter cat.#	30-Meter cat.#	60-Meter cat.#
0.25 mm	0.25 µm	-60 to 330/350 °C	13320	13323	13326
	0.50 µm	-60 to 330/350 °C	13335	13338	13341
	1.00 µm	-60 to 330/350 °C	13350	13353	13356
0.32 mm	0.25 µm	-60 to 330/350 °C	13321	13324	13327
	0.50 µm	-60 to 330/350 °C	13336	13339	13342
	1.00 µm	-60 to 330/350 °C	—	13354	13357
	4.00 µm	-60 to 330/350 °C	—	13396	—
0.53 mm	0.50 µm	-60 to 330/350 °C	13337	13340	—
	1.00 µm	-60 to 330/350 °C	13352	13355	—
	1.50 µm	-60 to 330/350 °C	13367	13370	13373

ID	df	temp. limits	10-Meter cat.#	12-Meter cat.#	20-Meter cat.#	25-Meter cat.#	50-Meter cat.#
0.15 mm	0.15 µm	-60 to 330/350 °C	43800	—	43801	—	—
	2.0 µm	-60 to 330/350 °C	—	—	43802	—	—
0.18 mm	0.18 µm	-60 to 330/350 °C	—	—	13302	—	—
	0.36 µm	-60 to 330/350 °C	—	—	13311	—	—
0.20 mm	0.33 µm	-60 to 330/350 °C	—	13397	—	13398	13399

Rxi®-5ms Columns (fused silica)

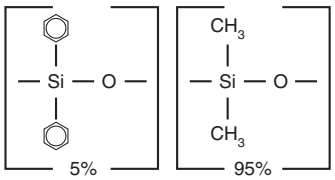
(low-polarity phase; Crossbond® diphenyl dimethyl polysiloxane)

- General-purpose columns for semivolatiles, phenols, amines, residual solvents, drugs of abuse, pesticides, PCB congeners (e.g., Aroclor mixes), solvent impurities.
- Most inert column on the market.
- Tested and guaranteed for ultra-low bleed; improved signal-to-noise ratio for better sensitivity and mass spectral integrity.
- Temperature range: -60 °C to 330/350 °C.
- Equivalent to USP G27 and G36 phases.

ID	df	temp. limits	15-Meter cat.#	30-Meter cat.#	60-Meter cat.#
0.25 mm	0.25 µm	-60 to 330/350 °C	13420	13423	13426
	0.40 µm	-60 to 330/350 °C	—	13481	—
	0.50 µm	-60 to 330/350 °C	13435	13438	13441
	1.00 µm	-60 to 330/350 °C	13450	13453	13456
0.32 mm	0.25 µm	-60 to 330/350 °C	13421	13424	13427
	0.50 µm	-60 to 330/350 °C	13436	13439	13442
	1.00 µm	-60 to 330/350 °C	13451	13454	13457
0.53 mm	0.25 µm	-60 to 330/350 °C	13422	13425	—
	0.50 µm	-60 to 330/350 °C	13437	13440	—
	1.00 µm	-60 to 330/350 °C	13452	13455	—
	1.50 µm	-60 to 330/350 °C	13467	13470	—

ID	df	temp. limits	12-Meter cat.#	20-Meter cat.#	25-Meter cat.#	50-Meter cat.#
0.18 mm	0.18 µm	-60 to 330/350 °C	—	13402	—	—
	0.30 µm	-60 to 330/350 °C	—	13409	—	—
	0.36 µm	-60 to 330/350 °C	—	13411	—	—
0.20 mm	0.33 µm	-60 to 330/350 °C	13497	—	13498	13499

Rxi®-5ms Structure



Similar to: (5%-phenyl)-methylpolysiloxane

similar phases

HP-5ms SemiVolatiles, HP-5ms, HP-5msUI, DB-5, Ultra-2, CP-Sil 8 CB, ZB-5, ZB-5msi

Rxi®-XLB Columns (fused silica)

(low-polarity proprietary phase)

- General-purpose columns exhibiting extremely low bleed. Ideal for many GC-MS applications, including pesticides, PCB congeners (e.g., Aroclor mixes), PAHs.
- Unique selectivity.
- Temperature range: 30 °C to 360 °C.

Improvements in polymer synthesis and tubing deactivation enable us to make inert, stable Rxi®-XLB columns especially well-suited for analyzing active, high molecular weight compounds with sensitive GC-MS systems, including ion trap detectors. Excellent efficiency, coupled with inertness, low bleed, and high thermal stability, make Rxi®-XLB columns ideal for analyzing semivolatile compounds in drinking water.

ID	df	temp. limits*	15-Meter cat.#	30-Meter cat.#	60-Meter cat.#
0.25 mm	0.10 µm	30 to 340/360 °C	13705	13708	—
	0.25 µm	30 to 340/360 °C	13720	13723	13726
	0.50 µm	30 to 340/360 °C	—	13738	—
	1.00 µm	30 to 340/360 °C	—	13753	—
0.32 mm	0.25 µm	30 to 340/360 °C	—	13724	13727
	0.50 µm	30 to 340/360 °C	—	13739	—
	1.00 µm	30 to 340/360 °C	—	13754	—
0.53 mm	0.50 µm	30 to 320/360 °C	—	13740	—

ID	df	temp. limits	20-Meter cat.#
0.18 mm	0.18 µm	30 to 340/360 °C	43702

*Maximum temperatures listed are for shorter length columns. Longer columns may have a different maximum temperature.

similar phases

DB-XLB, VF-Xms, MR1, ZB-XLB

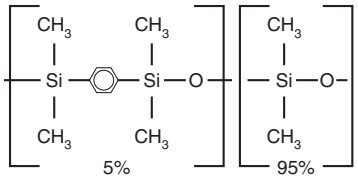
tech tip

Rxi®-XLB columns for Method 525

In combination with an Rxi®-XLB column, simple adjustments to the injection conditions can greatly improve sensitivity for active and high molecular weight Method 525 target compounds.

By eliminating contact between the sample and the hot metal surfaces in the injection port, a drilled Uniliner® inlet liner prevents analytes from degrading in the injection port.

Rxi®-5Sil MS Structure



Similar to: (5%-phenyl)-methylpolysiloxane

similar phases

DB-5ms, DB-5msUI, VF-5ms, ZB-5ms, ZB-SemiVolatiles, Rtx-5Sil MS

Rxi®-5Sil MS Columns (fused silica)

(low-polarity phase; Crossbond® 1,4-bis(dimethylsiloxy)phenylene dimethyl polysiloxane)

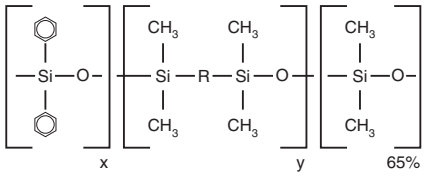
- Engineered to be a low-bleed GC-MS column.
- Excellent inertness for active compounds.
- General-purpose columns—ideal for GC-MS analysis of semivolatiles, polycyclic aromatic compounds, chlorinated hydrocarbons, phthalates, phenols, amines, organochlorine pesticides, organophosphorus pesticides, drugs, solvent impurities, and hydrocarbons.
- Temperature range: -60 °C to 350 °C.

The Rxi®-5Sil MS stationary phase incorporates phenyl groups in the polymer backbone. This improves thermal stability, reduces bleed, and makes the phase less prone to oxidation. Rxi®-5Sil MS columns are ideal for GC-MS applications requiring high sensitivity, including use in ion trap systems.

ID	df	temp. limits	15-Meter cat.#	30-Meter cat.#	60-Meter cat.#
0.25 mm	0.10 µm	-60 to 320/350 °C	13605	13608	—
	0.25 µm	-60 to 320/350 °C	13620	13623	13626
	0.50 µm	-60 to 320/350 °C	13635	13638	—
	1.00 µm	-60 to 320/350 °C	13650	13653	13697
0.32 mm	0.25 µm	-60 to 320/350 °C	13621	13624	—
	0.50 µm	-60 to 320/350 °C	—	13639	—
	1.00 µm	-60 to 320/350 °C	—	13654	—
0.53 mm	1.50 µm	-60 to 320/330 °C	—	13670	—

ID	df	temp. limits	10-Meter cat.#	20-Meter cat.#	40-Meter cat.#	60-Meter cat.#
0.15 mm	0.15 µm	-60 to 320/350 °C	43815	43816	—	—
	2.0 µm	-60 to 320/350 °C	—	43817	—	—
0.18 mm	0.10 µm	-60 to 320/350 °C	—	—	—	43607
	0.18 µm	-60 to 320/350 °C	—	43602	43605	—
	0.36 µm	-60 to 320/350 °C	—	43604	—	—

Rxi®-35Sil MS Structure



Similar to: (35%-phenyl)-methylpolysiloxane

similar phases

DB-35ms, DB-35msUI, VF-35ms, MR2

Rxi®-35Sil MS Columns (fused silica)

(midpolarity Crossbond® phase)

- Special selectivity and excellent inertness for substituted polar compounds, such as drugs, pesticides, herbicides, PCBs, phenols, etc.
- Provides superior separation for cannabinoids.
- Very low-bleed phase for GC-MS analysis.
- Extended temperature range: 50 °C to 340/360 °C.

ID	df	temp. limits*	15-Meter cat.#	30-Meter cat.#
0.25 mm	0.25 µm	50 to 340/360 °C	13820	13823
	0.50 µm	50 to 340/360 °C	13835	13838
	1.00 µm	50 to 320/340 °C	13850	13853
0.32 mm	0.25 µm	50 to 340/360 °C	13821	13824
	0.50 µm	50 to 340/360 °C	13836	13839
	1.00 µm	50 to 320/340 °C	13851	13854
0.53 mm	0.50 µm	50 to 340/360 °C	13837	13840
	1.00 µm	50 to 325/340 °C	13852	13855
	1.50 µm	50 to 310/330 °C	13856	13857
	3.00 µm	50 to 280/300 °C	13858	13859

*Maximum temperatures listed are for shorter length columns. Longer columns may have a different maximum temperature.

Rxi®-17 Columns (fused silica)

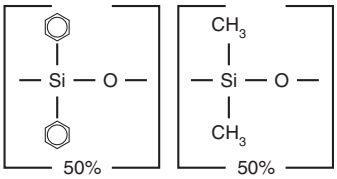
(midpolarity phase; Crossbond® diphenyl dimethyl polysiloxane)

- General-purpose columns for pesticides, herbicides, rosin acids, phthalate esters, triglycerides, sterols.
- Temperature range: 40 °C to 320 °C.

ID	df	temp. limits	15-Meter cat.#	30-Meter cat.#
0.25 mm	0.25 µm	40 to 280/320 °C	13520	13523
	0.50 µm	40 to 280/320 °C	—	13538
	1.00 µm	40 to 280/320 °C	—	13553
0.32 mm	0.25 µm	40 to 280/320 °C	—	13524
	0.50 µm	40 to 280/320 °C	—	13539
	1.00 µm	40 to 280/320 °C	—	13554
0.53 mm	0.25 µm	40 to 280/320 °C	—	13525
	0.50 µm	40 to 280/320 °C	—	13540
	0.83 µm	40 to 280/320 °C	—	13569
	1.00 µm	40 to 280/320 °C	13552	13555
	1.50 µm	40 to 280/320 °C	—	13570

ID	df	temp. limits	20-Meter cat.#
0.18 mm	0.18 µm	40 to 280/320 °C	13502

Rxi®-17 Structure



Similar to: (50%-phenyl)-methylpolysiloxane

similar phases

HP-17, DB-17, DB-17ht, DB-608, ZB-50

Rxi®-17Sil MS Columns (fused silica)

(midpolarity Crossbond® phase)

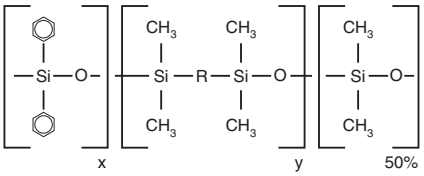
- Excellent inertness and selectivity for active environmental compounds, such as PAHs.
- Low bleed for use with sensitive detectors, such as MS.
- 340/360 °C upper temperature limits.
- Equivalent to USP phase G3.

ID	df	temp. limits*	15-Meter cat.#	30-Meter cat.#	60-Meter cat.#
0.25 mm	0.25 µm	40 to 340/360 °C	14120	14123	14126
0.32 mm	0.25 µm	40 to 340/360 °C	14121	14124	—

ID	df	temp. limits	10-Meter cat.#	20-Meter cat.#
0.15 mm	0.15 µm	40 to 340/360 °C	43820	43821
0.18 mm	0.18 µm	40 to 340/360 °C	—	14102
	0.36 µm	40 to 340/360 °C	—	14111

*Maximum temperatures listed are for shorter length columns. Longer columns may have a different maximum temperature.

Rxi®-17Sil MS Structure



Similar to: (50%-phenyl)-methylpolysiloxane

similar phases

DB-17ms, VF-17ms

also available

PAH Certified Reference Materials (CRMs)

www.restek.com/**rxi-pah**

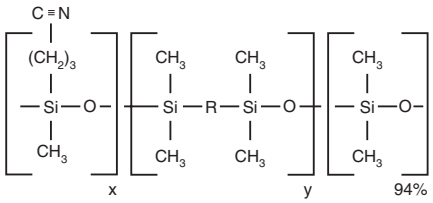
Rxi®-PAH Columns (fused silica)

(midpolarity proprietary phase)

- Ideal for EFSA PAH4 analysis—separates all priority compounds: benz[a]anthracene, chrysene, benzo[b]fluoranthene, and benzo[a]pyrene.
- Best resolution of chrysene from interfering PAHs, triphenylene, and cyclopenta[cd]pyrene.
- Complete separation of benzo [b], [k], [j], and [a] fluoranthenes.
- 360 °C thermal stability allows analysis of low-volatility dibenzo pyrenes.

ID	df	temp. limits	30-Meter cat.#	40-Meter cat.#	60-Meter cat.#
0.18 mm	0.07 µm	to 360 °C	—	49316	—
0.25 mm	0.10 µm	to 360 °C	49318	—	49317

Rxi®-624Sil MS (G43) Structure



Similar to: (6%-cyanopropylphenyl)-methylpolysiloxane

similar phases

DB-624, VF-624ms, CP-Select 624 CB

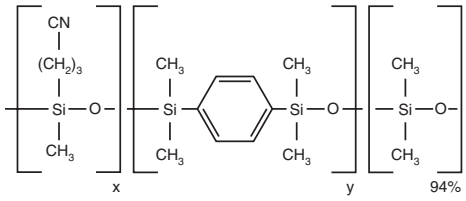
Rxi®-624Sil MS Columns (fused silica)

(midpolarity Crossbond® phase)

- Low-bleed, high-thermal stability column—maximum temperatures up to 320 °C.
- Inert—excellent peak shape for a wide range of compounds.
- Selective—G43 phase highly selective for volatile organics and residual solvents, great choice for USP <467>.
- Manufactured for column-to-column reproducibility—well-suited for validated methods.

ID	df	temp. limits	20-Meter cat.#	30-Meter cat.#	60-Meter cat.#	75-Meter cat.#	105-Meter cat.#
0.18 mm	1.00 µm	-20 to 300/320 °C	13865	—	—	—	—
0.25 mm	1.40 µm	-20 to 300/320 °C	—	13868	13869	—	—
0.32 mm	1.80 µm	-20 to 300/320 °C	—	13870	13872	—	—
0.53 mm	3.00 µm	-20 to 280/300 °C	—	13871	13873	13874	13875

Rxi®-1301Sil MS Structure



Similar to: (6%-cyanopropylphenyl)-methylpolysiloxane

similar phases

VF-1301ms

Rxi®-1301Sil MS Columns (fused silica)

(midpolarity Crossbond® phase)

- Highest thermal stability in the industry ensures dependable, accurate MS results and increased uptime.
- Stabilized cyano phase selectivity improves the performance of existing methods. Ideal for solvents, glycols, and other polar compounds.
- Rigorous QC testing ensures inertness and accurate, reliable data for multiple compound classes.
- Maximum temperature: 320 °C.

ID	df	temp. limits	15-Meter cat.#	30-Meter cat.#	60-Meter cat.#
0.25 mm	0.25 µm	-60 to 320 °C	—	16094	16096
	1.00 µm	-60 to 320 °C	—	16095	16097
0.32 mm	0.25 µm	-60 to 320 °C	—	16098	—
	1.00 µm	-60 to 320 °C	—	16099	16100
	1.50 µm	-60 to 320 °C	—	16104	16105
0.53 mm	1.00 µm	-60 to 320 °C	16101	16102	—
	1.50 µm	-60 to 320 °C	—	16103	—
	3.00 µm	-60 to 280/300 °C	—	16106	16107

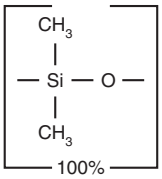
Rxi®-1HT Columns (fused silica)

(nonpolar phase; dimethyl polysiloxane)

- 40% longer lifetime from specially designed fused silica tubing.
- Columns processed for high-temperature applications, such as high molecular weight hydrocarbons.
- Temperature range: -60 to 400 °C.

ID	df	temp. limits	15-Meter cat.#	30-Meter cat.#
0.25 mm	0.10 µm	-60 to 400 °C	13950	13951
	0.25 µm	-60 to 400 °C	—	13952
0.32 mm	0.10 µm	-60 to 400 °C	13953	13954
	0.25 µm	-60 to 400 °C	—	13955

Rxi®-1HT Structure



Similar to: (100%-methyl)-polysiloxane

similar phases

DB-1ht, ZB-1HTinferno

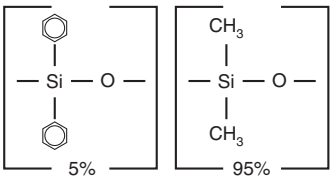
Rxi®-5HT Columns (fused silica)

(low-polarity phase; diphenyl dimethyl polysiloxane)

- 40% longer lifetime from specially designed fused silica tubing.
- Columns processed for high-temperature applications, such as mineral oil.
- Temperature range: -60 to 400 °C.

ID	df	temp. limits	15-Meter cat.#	30-Meter cat.#
0.25 mm	0.10 µm	-60 to 400 °C	13905	13908
	0.25 µm	-60 to 400 °C	—	13923
0.32 mm	0.10 µm	-60 to 400 °C	13906	13909
	0.25 µm	-60 to 400 °C	—	13924
0.53 mm	0.15 µm	-60 to 380/400 °C	—	13910

Rxi®-5HT Structure



Similar to: (5%-phenyl)-methylpolysiloxane

similar phases

DB-5ht, VF-5ht, ZB-5HTinferno

Restek GCxGC Columns: Your One Source for 2D Gas Chromatography

Why Use GCxGC?

GCxGC is a powerful multidimensional GC technique that combines two independent separations to accurately analyze highly complex samples. GCxGC involves two columns with differing stationary phase selectivity (orthogonal) that are press-fitted together in series and separated by a modulator. The first (primary) column performs an initial separation, and its effluent is continually focused and "injected" in defined cycles by the modulator onto the second (secondary) column, where another separation occurs. By choosing a secondary column that is orthogonal (has different selectivity) to the primary column, it is possible to separate and identify analytes that cannot be separated by the primary column. And, by keeping the secondary column very short, it is possible to maintain the separation produced by the primary column. Results generated through a series of high-speed chromatograms are plotted as a contour plot, sometimes known as a retention plane.

So, why use GCxGC? Because comprehensive two-dimensional gas chromatography allows you to perform separations that are simply not possible using standard one-dimensional chromatography!

Why Use Restek GCxGC Columns?

- Wide range of stationary phases offers orthogonal separations.
- High thermal stability increases system ruggedness.
- Unrivaled column inertness for accurate analysis of active compounds.
- 0.15, 0.18, and 0.25 mm ID formats accommodate varying sample capacities, speeds, and detectors.
- Secondary columns come in convenient 2 m lengths for economical methods development.

Restek has been performing comprehensive two-dimensional gas chromatography since its commercial inception. Our Innovations lab boasts multiple instruments dedicated to GCxGC applications, and we are continually exploring new application areas—including environmental, food safety, petroleum, forensics, fragrance, natural products, tobacco, metabolomics, and dietary supplements.

Restek's GCxGC secondary columns can be matched with any Restek® Rtx® or Rxi® primary column to create the perfect orthogonal separation for your application. See our combination guide below for help choosing your GCxGC columns. We also offer a range of complementary GC accessories—including Restek Premium inlet liners, the Restek® electronic leak detector, and Press-Tight® connectors—to boost your success with GCxGC.

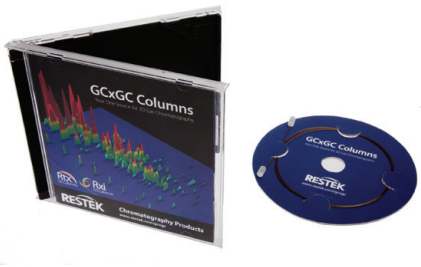
Restek GCxGC Column Combination Guide

To achieve ideal results in a GCxGC analysis, it is imperative that your primary and secondary columns feature orthogonal phases capable of producing differing separations. Use the chart below to find the perfect combination of Restek® columns to maximize the effectiveness of your GCxGC system.

	Primary Column		Secondary Column	
Application Area	**Phase**	**Selectivity**	**Phase**	**Selectivity**
Petrochemical	Rxi®-1ms	Nonpolar	Rxi®-17Sil MS	Midpolar, aromatic selective
Petrochemical	Rxi®-5Sil MS	Nonpolar	Rxi®-17Sil MS	Midpolar, aromatic selective
PAHs, environmental	Rxi®-17Sil MS	Midpolar, aromatic selective	Rxi®-1ms	Nonpolar
PAHs, environmental	Rxi®-17Sil MS	Midpolar, aromatic selective	Rxi®-5Sil MS	Nonpolar
PCBs, PBDEs, PAHs, environmental	Rxi®-XLB	Nonpolar	Rxi®-17Sil MS	Midpolar, aromatic selective
Mono-ortho, coplanar PCBs	Rxi®-1ms	Nonpolar	Rxi®-XLB	Planar selective
Mono-ortho, coplanar PCBs	Rxi®-5Sil MS	Nonpolar	Rxi®-XLB	Planar selective
Pesticides, nitroaromatics, halogenated compounds	Rxi®-1ms	Nonpolar	Rtx®-200	Midpolar, electronegative selectivity
Pesticides, nitroaromatics, halogenated compounds	Rxi®-5Sil MS	Nonpolar	Rtx®-200	Midpolar, electronegative selectivity
Pesticides, nitroaromatics, halogenated compounds	Rxi®-XLB	Nonpolar	Rtx®-200	Midpolar, electronegative selectivity
Flavors, fragrances	Rxi®-1ms	Nonpolar	Stabilwax®	Polar
Flavors, fragrances	Rxi®-5Sil MS	Nonpolar	Stabilwax®	Polar
Flavors, fragrances	Stabilwax®	Polar	Rxi®-1ms	Nonpolar
Flavors, fragrances	Stabilwax®	Polar	Rxi®-5Sil MS	Nonpolar

Primary GCxGC Columns (In order of increasing polarity)

Phase	L	ID	df	temp. limits	cat.#
Rxi-1ms	30 m	0.25 mm	0.25 µm	-60 to 330/350 °C	13323
Rxi-5Sil MS	30 m	0.25 mm	0.25 µm	-60 to 320/350 °C	13623
Rxi-XLB	30 m	0.25 mm	0.25 µm	30 to 340/360 °C	13723
Rxi-17Sil MS	30 m	0.25 mm	0.25 µm	40 to 340/360 °C	14123
Rtx-200	30 m	0.25 mm	0.25 µm	-20 to 320/340 °C	15023
Stabilwax	30 m	0.25 mm	0.25 µm	40 to 250/260 °C	10623



Secondary GCxGC Columns (In order of increasing polarity)

Phase	L	ID	df	temp. limits	cat.#
Rxi-1ms	2 m	0.15 mm	0.15 µm	-60 to 330/350 °C	15114
	2 m	0.18 mm	0.18 µm	-60 to 330/350 °C	15120
	2 m	0.25 mm	0.25 µm	-60 to 330/350 °C	15127
Rxi-5Sil MS	2 m	0.15 mm	0.15 µm	-60 to 330/350 °C	15113
	2 m	0.18 mm	0.18 µm	-60 to 330/350 °C	15119
	2 m	0.25 mm	0.25 µm	-60 to 330/350 °C	15126
Rxi-XLB	2 m	0.15 mm	0.15 µm	30 to 340/360 °C	15115
	2 m	0.18 mm	0.18 µm	30 to 340/360 °C	15121
	2 m	0.25 mm	0.25 µm	30 to 340/360 °C	15128
Rxi-17Sil MS	2 m	0.15 mm	0.15 µm	40 to 340/360 °C	15110
	2 m	0.18 mm	0.18 µm	40 to 340/360 °C	15116
	2 m	0.25 mm	0.25 µm	40 to 340/360 °C	15123
Rtx-200	2 m	0.15 mm	0.15 µm	-20 to 320/340 °C	15111
	2 m	0.18 mm	0.18 µm	-20 to 320/340 °C	15117
	2 m	0.25 mm	0.25 µm	-20 to 320/340 °C	15124
Stabilwax	2 m	0.15 mm	0.15 µm	40 to 250/260 °C	15112
	2 m	0.18 mm	0.18 µm	40 to 250/260 °C	15118
	2 m	0.25 mm	0.25 µm	40 to 250/260 °C	15125

To choose the perfect primary/ secondary column combination for your application, use our guide on at

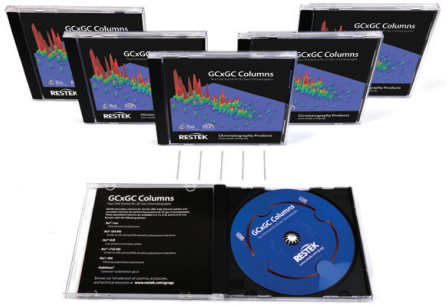
www.restek.com/gcxgc

GCxGC Secondary Column Selectivity Kits

Description		qty.	cat.#
GCxGC (0.15 mm) Selectivity Kit		kit	15129
Includes (each product also available separately)			
Rxi-1ms	2 m x 0.15 mm x 0.15 µm	ea.	15114
Rxi-5Sil MS	2 m x 0.15 mm x 0.15 µm	ea.	15113
Rxi-XLB	2 m x 0.15 mm x 0.15 µm	ea.	15115
Rxi-17Sil MS	2 m x 0.15 mm x 0.15 µm	ea.	15110
Rtx-200	2 m x 0.15 mm x 0.15 µm	ea.	15111
Stabilwax	2 m x 0.15 mm x 0.15 µm	ea.	15112
Universal Press-Tight Connectors	Deactivated	5-pk.	20429

Description		qty.	cat.#
GCxGC (0.18 mm) Selectivity Kit		kit	15130
Includes (each product also available separately)			
Rxi-1ms	2 m x 0.18 mm x 0.18 µm	ea.	15120
Rxi-5Sil MS	2 m x 0.18 mm x 0.18 µm	ea.	15119
Rxi-XLB	2 m x 0.18 mm x 0.18 µm	ea.	15121
Rxi-17Sil MS	2 m x 0.18 mm x 0.18 µm	ea.	15116
Rtx-200	2 m x 0.18 mm x 0.18 µm	ea.	15117
Stabilwax	2 m x 0.18 mm x 0.18 µm	ea.	15118
Universal Press-Tight Connectors	Deactivated	5-pk.	20429

Description		qty.	cat.#
GCxGC (0.25 mm) Selectivity Kit		kit	15131
Includes (each product also available separately)			
Rxi-1ms	2 m x 0.25 mm x 0.25 µm	ea.	15127
Rxi-5Sil MS	2 m x 0.25 mm x 0.25 µm	ea.	15126
Rxi-XLB	2 m x 0.25 mm x 0.25 µm	ea.	15128
Rxi-17Sil MS	2 m x 0.25 mm x 0.25 µm	ea.	15123
Rtx-200	2 m x 0.25 mm x 0.25 µm	ea.	15124
Stabilwax	2 m x 0.25 mm x 0.25 µm	ea.	15125
Universal Press-Tight Connectors	Deactivated	5-pk.	20429



- Each kit includes one Rxi®-1ms, Rxi®-5Sil MS, Rxi®-17Sil MS, Rtx®-200, Rxi®-XLB, and Stabilwax® column.
- Comprehensive kit simplifies column selection for method developers and frequent GCxGC users alike.
- Included Press-Tight® connectors offer a reliable, hassle-free installation.

tech tip

Use a 20 m fast GC column in place of a standard 30 m column; a 10 m in place of a 15 m; and a 40 m in place of a 60 m.

also available

Rtx® and Stabilwax® columns for fast GC

How to Get the Same Chromatogram With a Fast GC Column

For over 20 years, 0.15 mm ID columns have been proven to work in virtually any application field. When switching to a smaller-ID and shorter-length column, there are several things you must do in order for your new, faster method to give you the same chromatogram (i.e., separations) as your old method:

1) Choose a column with the same phase ratio.
2) Adapt the temperature program so that the analyte elution temperatures are the same.
3) Adjust the linear velocity. (For a good starting point, see your column's certificate of analysis.)

Following these guidelines will help ensure that you achieve similar chromatography (i.e., identical elution order and resolution)— in a fraction of the time.

Shorten Analysis Time and Boost Productivity With Restek® Fast GC Columns

The math is simple: the less time it takes to perform each analysis, the more samples your laboratory can process. The easiest way to reduce analysis time while still maintaining resolution of critical compounds is to use hydrogen as your carrier gas. If hydrogen is not an option, or if you already use it and want to go even faster, turn to the higher resolving power of smaller-bore capillary columns from Restek.

As column ID decreases, column efficiency (i.e., plates/meter) increases, allowing you to achieve the same, or even better, resolution using a shorter length—and significantly less time. Whether you are currently using 0.25 or 0.53 mm ID columns, you can shorten analysis times as much as twofold by switching to Restek® 0.15 mm ID fast GC columns. These high-efficiency columns speed up separations on your existing GC or GC-MS instrumentation—while maintaining resolution and meeting method criteria—so you can make more runs per shift with the same exceptional accuracy you've come to expect from Restek.

Fast GC 0.15 mm ID Columns

- Increase productivity up to 2x without sacrificing resolution.
- Compatible with your existing GC setup.
- Low bleed for maximum sensitivity and accurate GC-MS analyses.
- Thick films (up to 2 µm) eliminate loadability issues.
- OD similar to 0.25 mm columns for easy installation.
- Excellent as secondary columns for GCxGC.
- Available in a variety of stationary phases.

Rxi®-1ms Columns for Fast GC (fused silica)
(nonpolar phase; Crossbond® dimethyl polysiloxane)

ID	df	temp. limits	10-Meter cat.#	20-Meter cat.#
0.15 mm	0.15 µm	-60 to 330/350 °C	43800	43801

Rxi®-5Sil MS Columns for Fast GC (fused silica)
(low-polarity phase; Crossbond® 1,4-bis(dimethylsiloxy)phenylene dimethyl polysiloxane)

ID	df	temp. limits	10-Meter cat.#	20-Meter cat.#
0.15 mm	0.15 µm	-60 to 320/350 °C	43815	43816
	2.0 µm	-60 to 320/350 °C	—	43817

Rxi®-17Sil MS Columns for Fast GC (fused silica)
(midpolarity Crossbond® phase)

ID	df	temp. limits	10-Meter cat.#	20-Meter cat.#
0.15 mm	0.15 µm	40 to 340/360 °C	43820	43821

Rxi® Guard/Retention Gap Columns (fused silica)

- Extend column lifetime.
- Excellent inertness—obtain lower detection limits for active compounds.
- Sharper chromatographic peaks by utilizing retention gap technology.
- Maximum temperature: 360 °C.

Nominal ID	Nominal OD	5-Meter cat.#	5-Meter/6-pk. cat.#	10-Meter cat.#	10-Meter/6-pk. cat.#
0.25 mm	0.37 ± 0.04 mm	10029	10029-600	10059	10059-600
0.32 mm	0.45 ± 0.04 mm	10039	10039-600	10064	10064-600
0.53 mm	0.69 ± 0.05 mm	10054	10054-600	10073	10073-600

Fused Silica Capillary & PLOT Column Ferrule Guide

GC Column ID	Ferrule ID
0.15 mm	0.4
0.18 mm	0.4
0.25 mm	0.4
0.32 mm	0.5
0.53 mm	0.8

did you know?

We test our guard columns/transfer lines with a comprehensive test mix to ensure high inertness.

it's a fact

Use guard columns to:

- Reduce effects of dirty samples on column performance.
- Reduce downtime and maintenance.

Certificates of analysis for 5 m and 10 m Restek® guard columns are now provided electronically. To view and download your 5 m or 10 m guard column certificate, simply visit **www.restek.com/documentation** then enter your catalog # and serial #.

also available

Press-Tight® connectors.

www.restek.com/press-tight

Innovative Integra-Guard® Columns

Get the protection without the connection!

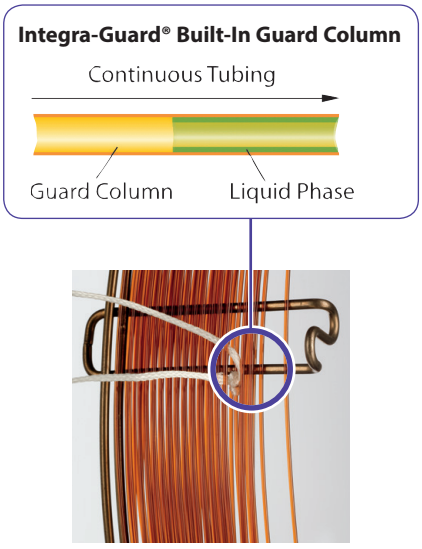
- No leaks for a more robust method.
- No column connections for easier, faster maintenance.
- No peak distortions due to connector dead volume and thermal capacity.

For analysts who find it inconvenient to make a leak-free connection between the guard column and the analytical column, we offer Integra-Guard® columns. These innovative columns incorporate both a guard column and an analytical column in a continuous length of tubing, eliminating the connection and all connection-associated problems! The guard column section is marked separately from the analytical column using high-temperature string.

A wide variety of our Integra-Guard® capillary columns are listed here. The Integra-Guard® column is so economical that we challenge you to compare our price against that of a conventional connection, even if you assemble it yourself. If you are currently using a guard column, or are considering using one, call today and ask about Integra-Guard® columns.

Description	qty.	cat.#
Rxi-5Sil MS		
15 m, 0.25 mm ID, 0.25 µm Rxi-5Sil MS w/10 m Integra-Guard Column	ea.	13620-127
30 m, 0.25 mm ID, 0.25 µm Rxi-5Sil MS w/5 m Integra-Guard Column	ea.	13623-124
30 m, 0.25 mm ID, 0.25 µm Rxi-5Sil MS w/10 m Integra-Guard Column	ea.	13623-127
15 m, 0.25 mm ID, 0.50 µm Rxi-5Sil MS w/5 m Integra-Guard Column	ea.	13635-124
30 m, 0.25 mm ID, 0.50 µm Rxi-5Sil MS w/5 m Integra-Guard Column	ea.	13638-124
30 m, 0.25 mm ID, 0.50 µm Rxi-5Sil MS w/10 m Integra-Guard Column	ea.	13638-127
30 m, 0.32 mm ID, 0.50 µm Rxi-5Sil MS w/5 m Integra-Guard Column	ea.	13639-125
30 m, 0.32 mm ID, 1.00 µm Rxi-5Sil MS w/5 m Integra-Guard Column	ea.	13654-125

Integra-Guard® columns are available for all phases listed for columns with 0.25, 0.32, or 0.53 mm ID.
Rtx® and Stabilwax® Integra-Guard® columns are also available.
If you don't see what you need here, contact Customer Service.



String indicates where the analytical column begins.

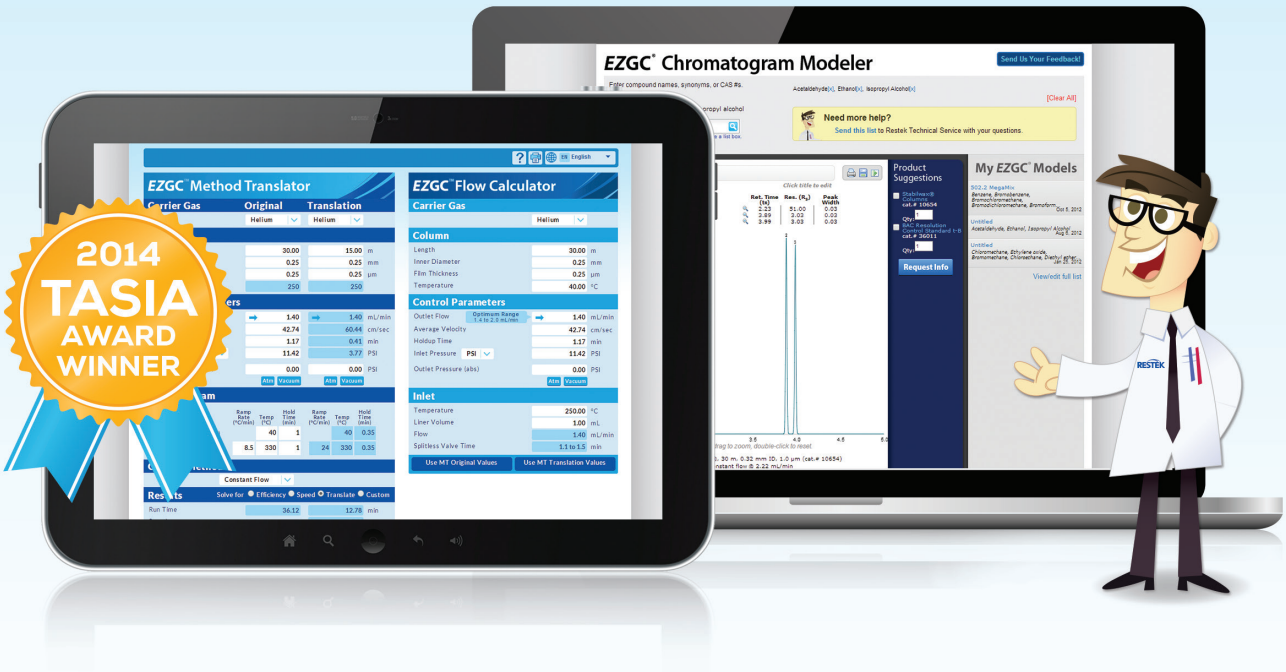
similar guards

DuraGuard, EZ-Guard, Guardian

Speed Up and Simplify GC Method Development With

Restek's *EZGC*® Online Suite

Featuring Rxi® GC columns



- Model chromatograms
- Column recommendations
- Translate methods NEW!
- Calculate flows NEW!

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