

## Tenax™-GR Adsorbent Resin for Trapping Volatiles

- Trap Volatiles from Air, Liquids and Solids
- High Breakthrough Volumes for Low Molecular Weight Volatiles
- High Temperature Limit of 350° C
- Low Affinity for Water
- Contains 30% Graphite in Tenax
- Superior Trapping of Volatiles

The new Tenax-GR is a composite material of Tenax and 30% graphite. The resulting material gives higher breakthrough volumes for most volatile organics, yet still has a low affinity for water. In addition Tenax™-GR maintains its high temperature stability to 350° C. These properties make Tenax-GR an ideal adsorbent for the trapping of volatiles from air, water and solid samples. Using thermal desorption techniques such as the S.I.S.™ Purge and Trap system in conjunction with the Short Path™ Thermal Desorption System, detection of volatile organics in the ppb and ppt level is feasible. Due to its low affinity for water, Tenax-GR is especially useful for the purging and trapping of volatiles from high moisture content samples including the analysis of volatile organic compounds in water.



### Properties of Tenax-GR

Specific Surface Area	24.1 m <sup>2</sup> /g
Pore Volume	2.4 cc/g
Average Pore Size	200 nm
Density	0.55 g/cc
Mesh Size	60/80
(other mesh sizes available on special request)	

Part No.	Description	Size	Price
979401	Tenax-GR, 60/80 mesh	5.0 gram	
979402	Tenax-GR, 60/80 mesh	10.0 gram	
979403	Tenax-GR, 60/80 mesh	25.0 gram	
979404	Tenax GR 60/80 mesh	100 gram	
979405	Tenax GR 60/80 mesh	500 gram	

Pricing on larger quantities and other mesh sizes available on request.

### Breakthrough Volumes for Tenax™-TA and Tenax™-GR at 20° C

Test Compound	Tenax™-TA		Tenax™-GR	
	ml/g	ml/ml	ml/g	ml/ml
<b>Refrigerants</b>				
MonoBromotrifluoromethane	5.6x10 <sup>1</sup>	1.1x10 <sup>1</sup>	2.0x10 <sup>1</sup>	1.1x10 <sup>1</sup>
MonoChlorodifluoromethane	5.6x10 <sup>1</sup>	1.1x10 <sup>1</sup>	2.0x10 <sup>1</sup>	1.1x10 <sup>1</sup>
Dichlorodifluoromethane	5.6x10 <sup>1</sup>	1.1x10 <sup>1</sup>	2.0x10 <sup>1</sup>	1.1x10 <sup>1</sup>
Trichlorofluoromethane	5.6x10 <sup>1</sup>	1.1x10 <sup>1</sup>	2.0x10 <sup>1</sup>	1.1x10 <sup>1</sup>
Dibromodichloromethane	5.6x10 <sup>1</sup>	1.1x10 <sup>1</sup>	2.0x10 <sup>1</sup>	1.1x10 <sup>1</sup>
1,1,2-trichloro 1,1,2-trifluoroethane	1.3x10 <sup>2</sup>	2.6x10 <sup>1</sup>	7.6x10 <sup>1</sup>	4.2x10 <sup>1</sup>
<b>Hydrocarbons</b>				
Methane	5.7	1.1	2.2	1.2
Ethane	2.0x10 <sup>1</sup>	3.9	1.4x10 <sup>1</sup>	8.0
Propane	1.3x10 <sup>2</sup>	2.6x10 <sup>1</sup>	8.3x10 <sup>1</sup>	4.6x10 <sup>1</sup>
Butane	6.9x10 <sup>2</sup>	1.4x10 <sup>2</sup>	3.9x10 <sup>2</sup>	2.2x10 <sup>2</sup>
<b>Halogenated Compounds</b>				
Monochloromethane	2.2x10 <sup>2</sup>	4.4x10 <sup>1</sup>	2.2x10 <sup>2</sup>	1.2x10 <sup>2</sup>
Dichloromethane	1.4x10 <sup>3</sup>	2.8x10 <sup>2</sup>	1.6x10 <sup>3</sup>	8.9x10 <sup>2</sup>
Chloroform	7.4x10 <sup>3</sup>	1.5x10 <sup>3</sup>	5.7x10 <sup>3</sup>	3.2x10 <sup>3</sup>
Tetrachloromethane	1.6x10 <sup>4</sup>	3.2x10 <sup>3</sup>	1.1x10 <sup>4</sup>	6.3x10 <sup>3</sup>
Monochloroethane	1.3x10 <sup>3</sup>	2.5x10 <sup>2</sup>	7.1x10 <sup>2</sup>	3.9x10 <sup>2</sup>
1,1-dichloroethane	3.4x10 <sup>3</sup>	6.6x10 <sup>2</sup>	4.3x10 <sup>3</sup>	2.4x10 <sup>3</sup>
1,2-dichloroethane	9.6x10 <sup>3</sup>	1.9x10 <sup>3</sup>	4.3x10 <sup>4</sup>	2.4x10 <sup>4</sup>
1,1,1-trichloroethane	1.9x10 <sup>4</sup>	3.7x10 <sup>3</sup>	2.2x10 <sup>4</sup>	1.2x10 <sup>4</sup>
1,1,2-trichloroethane	1.1x10 <sup>5</sup>	2.2x10 <sup>4</sup>	1.0x10 <sup>5</sup>	5.8x10 <sup>4</sup>
1,1,2,2-tetrachloroethane	9.4x10 <sup>5</sup>	1.9x10 <sup>5</sup>	1.7x10 <sup>6</sup>	9.3x10 <sup>5</sup>
Dibromomethane	2.1x10 <sup>4</sup>	4.0x10 <sup>3</sup>	3.0x10 <sup>4</sup>	1.6x10 <sup>4</sup>
Bromoform	1.1x10 <sup>3</sup>	2.2x10 <sup>2</sup>	8.5x10 <sup>2</sup>	4.7x10 <sup>2</sup>
Tetrabromomethane	2.6x10 <sup>6</sup>	5.0x10 <sup>5</sup>	1.5x10 <sup>6</sup>	8.5x10 <sup>5</sup>
Monobromoethane	2.4x10 <sup>3</sup>	4.7x10 <sup>2</sup>	2.9x10 <sup>3</sup>	1.6x10 <sup>3</sup>
1,2-dibromoethane	1.4x10 <sup>5</sup>	2.7x10 <sup>4</sup>	2.0x10 <sup>5</sup>	1.1x10 <sup>5</sup>
1,1,2,2-tetrabromoethane	3.5x10 <sup>7</sup>	6.9x10 <sup>6</sup>	5.9x10 <sup>6</sup>	3.3x10 <sup>6</sup>
Vinyl chloride	3.5x10 <sup>2</sup>	6.9x10 <sup>1</sup>	5.0x10 <sup>2</sup>	2.8x10 <sup>2</sup>
<b>Aromatics</b>				
Benzene	4.5x10 <sup>4</sup>	8.8x10 <sup>3</sup>	3.4x10 <sup>4</sup>	.9x10 <sup>4</sup>
Toluene	1.8x10 <sup>5</sup>	3.5x10 <sup>4</sup>	2.3x10 <sup>5</sup>	1.3x10 <sup>5</sup>
<b>WATER</b>				
	5.6x10 <sup>1</sup>	1.1x10 <sup>1</sup>	4.7x10 <sup>1</sup>	2.6x10 <sup>1</sup>

More data on our web site at:

[www.sisweb.com/referenc/resins.htm](http://www.sisweb.com/referenc/resins.htm)