

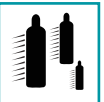
MATHESON Portables™

MATHESON Portables™



MATHESON

ask. . .The Gas Professionals™



Introduction



As technology moves from inside the lab to the outside world, MATHESON Portables™ make calibration easy, accurate and reliable.

MATHESON Portables™ come in a variety of cylinder sizes to meet application needs for industrial hygiene and safety, environmental monitoring, toxic organic measurements, and laboratory field analysis, to name a few.

How to find what you need

We have organized our information and developed the following segments:

- Calibration Products For Safety
- Calibration Products for Laboratory Analysis
- Calibration Products for Air Toxics Monitoring
- PELgas™ Gas Mixture Calibration Standards
- Complete Portables™ Gas Listing
- Complete MicroMATE™ Equipment Product Listing

Still can't find what you need? Please call MATHESON and we will find it for you!

MATHESON Portables™ Gas Specifications

Cylinder Size	Concentration Range	Nominal Accuracy HR/R/NR
MicroMAT™-10	≥ 20 ppm	0 / /10 / /5%
	< 20 ppm	0 / /0 / /10%
MicroMAT™-14	≥ 20 ppm	0 / /0 / /5%
	< 20 ppm	0 / /0 / /10%
MicroMAT™-17	≥ 20 ppm	0 / /0 / /5%
	< 20 ppm	0 / /0 / /10%
MicroMAT™-58	≥ 20 ppm	10 / /5 / /5%
	< 20 ppm	15 / /10 / /5%
MicroMAT™-105	≥ 20 ppm	0 / /10 / /5%
	< 20 ppm	0 / /0 / /10%
MicroMAT™-116	≥ 20 ppm	10 / /5 / /5%
	< 20 ppm	15 / /10 / /5%
MicroMAT™-221	≥ 20 ppm	0 / /10 / /5%
	< 20 ppm	0 / /0 / /10%
MiniMAT™-6R	≥ 20 ppm	10 / /5 / /5%
	< 20 ppm	15 / /10 / /5%
MiniMAT™-7	Pure Gases	Research MATHESON
Lecture Bottle	Pure Gases	CP Technical

Minor Component Reactivity Ratings:

HR = Highly Reactive, includes Cl₂, HCl, HCN, NO₂ and H₂S/CO/hydrocarbons/air

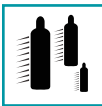
R = Reactive, includes NO, SO₂, H₂S in N₂ or Air, dienes and alkynes

NR = Non Reactive, includes CO, CO₂, N₂O, O₂, alkanes and alkenes

0//0//5% means no Highly Reactive, no Reactive, and 5% accuracy on Non Reactive minor components.

Traceability: NIST Traceable by Weight and/or Analysis

Product Label: Product will have the nominal concentration and will meet the specifications as outlined above.



2 Cylinder Specifications



Cylinder Name: MicroMAT™-10
Gas Volume: 10 Liters
Pressure Rating: 160 psi
Outlet Connection: Trigger push button with applicator tube
Material of Construction: Aluminum
DOT Rating: DOT 2Q
Cylinder Dimensions: 2.9" x 11"
Type: Aerosol (Disposable)



Cylinder Name: MicroMAT™-116
Gas Volume: 116 Liters
Pressure Rating: 1000 psi
Outlet Connection: C10
Material of Construction: Aluminum
DOT Rating: DOT 39
TC Rating: TC-39M
Cylinder Dimensions: 14.25" x 3.53"
Type: Disposable



Cylinder Name: MicroMAT™-14
Gas Volume: 14 Liters
Pressure Rating: 240 psi
Outlet Connection: CGA 160
Material of Construction: Steel
DOT Rating: DOT 4B 240
Cylinder Dimensions: 3.0" x 12.4"
Type: Disposable



Cylinder Name: MicroMAT™-221
Gas Volume: 221 Liters
Pressure Rating: 260 psi
Outlet Connection: CGA 160
Material of Construction: Steel
DOT Rating: DOT 39
TC Rating: TC-39M
Cylinder Dimensions: 9" x 16.75"
Type: Disposable



Cylinder Name: MicroMAT™-17
Gas Volume: 17 Liters
Pressure Rating: 240 psi
Outlet Connection: CGA 600
Material of Construction: Steel
DOT Rating: DOT 39
TC Rating: TC-39M
Cylinder Dimensions: 2.75" x 10.75"
Type: Disposable



Cylinder Name: MiniMAT™-6R
Gas Volume: 103 Liters
Pressure Rating: 1800 psi
Outlet Connection: CGA 180
Material of Construction: Aluminum
DOT Rating: DOT 3AL
TC Rating: TC-3AL
Cylinder Dimensions: 3.25" x 12.4"
Type: Refillable, Resale



Cylinder Name: MicroMAT™-58
Gas Volume: 58 Liters
Pressure Rating: 500 psi
Outlet Connection: C10
Material of Construction: Aluminum
DOT Rating: DOT 39
TC Rating: TC-39M
Cylinder Dimensions: 3.5" x 14.4"
Type: Disposable



Cylinder Name: MiniMAT™-7
Gas Volume: 53 Liters
Pressure Rating: 1800 psi
Outlet Connection: CGA by Gas
Material of Construction: Steel
DOT Rating: 3E1800
Cylinder Dimensions: 2" x 13"
Type: Refillable

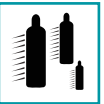


Cylinder Name: MicroMAT™-105
Gas Volume: 105 Liters
Pressure Rating: 1000 psi
Outlet Connection: C10
Material of Construction: Steel
DOT Rating: DOT 39 or E8990
TC Rating: TC-39M
Cylinder Dimensions: 3.25" x 13.9"
Type: Disposable



Cylinder Name: MATHESON Lecture Bottle
Gas Volume: 56 Liters
Pressure Rating: 1775 psi
Outlet Connection: CGA 180 or 170
Material of Construction: Steel
DOT Rating: DOT 3E-1800
Cylinder Dimensions: 2" x 12"
Type: Refillable**

**Refillable Lecture Bottles are limited to cylinders in inert gas service. Gas cylinders in other services will not be refillable.



The assurance of safe breathing air and a safe work environment is paramount to any workplace. MATHESON offers a complete line of calibration products designed to accurately calibrate the gas detection instruments used to monitor workspaces and ensure worker protection. The MATHESON Portables™ line of calibration gases and equipment will help you comply with all OSHA regulations.



How to Find the Safety Calibration Products you need.

Our calibration gas offering is segmented as follows:

- Pure Gases
- Two Component Mixtures
- Multicomponent Mixtures

If you don't see your product listed, please call MATHESON for more information!

Pure Gases

Product Description	Base Code	MicroMAT™/MiniMAT™ Cylinders							
		10	14	17	58	105	116	221	6R
Air Zero Gas	GMT10004	TK		TB		TG		TD	6R
Argon, Ultra High Purity	GMT10006	TK		TB		TG		TD	6R
Helium, Ultra High Purity	GMT10009	TK		TB		TG		TD	6R
Hydrogen, Ultra High Purity	GMT10013		TC	TB					6R
Methane, CP	GMT10015		TC	TB					6R
Nitrogen, Zero Gas	GMT10022	TK		TB		TG		TD	6R

NEW Portable Cylinder Size:

116 liter aluminum cylinder for reactive gas blends;
Designed for high volume users of hydrogen sulfide four gas mixtures.
Please call MATHESON for more information.

Ordering Information
 When ordering, use base code plus cylinder designation suffix for the appropriate cylinder type.
 Ex: GMT10002TH is for Air Ultra Zero Certified in a MicroMAT™-58 Cylinder

Note: See Cylinder Specifications Chart on page 2 for description of cylinders.

Don't see a product or cylinder size you need, call us to quote!



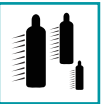
Product Description	Base Code	MicroMAT™/MiniMAT™ Cylinders							
		10	14	17	58	105	116	221	6R
Ammonia									
25 ppm Ammonia in Nitrogen	GMT10519				TH		TM		6R
50 ppm Ammonia in Nitrogen	GMT10220				TH		TM		6R
200 ppm Ammonia in Nitrogen	GMT10520				TH		TM		6R
Carbon Dioxide									
100 ppm Carbon Dioxide in Air	GMT10521	TK	TC	TB	TH	TG		TD	6R
1000 ppm Carbon Dioxide in Air	GMT10025	TK	TC	TB	TH	TG		TD	6R
5 % Carbon Dioxide in Air	GMT10522	TK	TC	TB	TH	TG		TD	6R
1000 ppm Carbon Dioxide in Nitrogen	GMT10313	TK	TC	TB	TH	TG		TD	6R
2.5 % Carbon Dioxide in Nitrogen	GMT10523	TK	TC	TB	TH	TG		TD	6R
5 % Carbon Dioxide in Nitrogen	GMT10524	TK	TC	TB	TH	TG		TD	6R
10 % Carbon Dioxide in Nitrogen	GMT10525	TK	TC	TB	TH	TG		TD	6R
Carbon Monoxide									
20 ppm Carbon Monoxide in Air	GMT10526	TK		TB	TH	TG		TD	6R
25 ppm Carbon Monoxide in Air	GMT10527	TK		TB	TH	TG		TD	6R
40 ppm Carbon Monoxide in Air	GMT10528	TK		TB	TH	TG		TD	6R
50 ppm Carbon Monoxide in Air	GMT10028	TK		TB	TH	TG		TD	6R
60 ppm Carbon Monoxide in Air	GMT10529	TK		TB	TH	TG		TD	6R
100 ppm Carbon Monoxide in Air	GMT10029	TK		TB	TH	TG		TD	6R
200 ppm Carbon Monoxide in Air	GMT10030	TK		TB	TH	TG		TD	6R
300 ppm Carbon Monoxide in Air	GMT10530	TK		TB	TH	TG		TD	6R
50 ppm Carbon Monoxide in Nitrogen	GMT10531	TK		TB	TH	TG		TD	6R
1000 ppm Carbon Monoxide in Nitrogen	GMT10532	TK		TB	TH	TG		TD	6R
Chlorine									
3 ppm Chlorine in Nitrogen	GMT10533				TH				
5 ppm Chlorine in Nitrogen	GMT10201				TH				
10 ppm Chlorine in Nitrogen	GMT10202				TH				
50 ppm Chlorine in Nitrogen	GMT10534				TH				
Ethylene Oxide									
10 ppm Ethylene Oxide in Nitrogen	GMT10535				TH		TM		6R
Halocarbon 12									
1000 ppm Halocarbon 12 in Nitrogen	GMT10536	TK	TC	TB	TH	TG		TD	6R
Hexane									
300 ppm Hexane in Helium	GMT10537	TK		TB	TH	TG		TD	6R
15 % LEL (1800 ppm) Hexane in Air	GMT10538	TK		TB	TH	TG		TD	6R
40 % LEL (4800 ppm) Hexane in Air	GMT10539	TK		TB	TH	TG		TD	6R
Hydrogen									
200 ppm Hydrogen in Air	GMT10540	TK		TB	TH	TG		TD	6R
800 ppm Hydrogen in Air	GMT10541	TK		TB	TH	TG		TD	6R
50 % LEL (2.0%) Hydrogen in Air	GMT10033	TK		TB	TH	TG		TD	6R
Hydrogen Chloride									
5 ppm Hydrogen Chloride in Nitrogen	GMT10542				TH				
10 ppm Hydrogen Chloride in Nitrogen	GMT10543				TH				
50 ppm Hydrogen Chloride in Nitrogen	GMT10544				TH				

Ordering Information

When ordering, use base code plus cylinder designation suffix for the appropriate cylinder type.
 Ex: GMT10002TH is for Air Ultra Zero Certified in a MicroMAT™-58 Cylinder

Note: See Cylinder Specifications Chart on page 2 for description of cylinders.

Don't see a product or cylinder size you need, call us to quote!



Two Component Mixtures (continued)

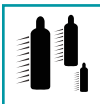
Product Description	Base Code	MicroMAT™/MiniMAT™ Cylinders							
		10	14	17	58	105	116	221	6R
Hydrogen Cyanide									
5 ppm Hydrogen Cyanide in Nitrogen	GMT10545				TH				
10 ppm Hydrogen Cyanide in Nitrogen	GMT10546				TH				
Hydrogen Sulfide									
25 ppm Hydrogen Sulfide in Air	GMT10222				TH		TM		6R
40 ppm Hydrogen Sulfide in Air	GMT10547				TH		TM		6R
50 ppm Hydrogen Sulfide in Air	GMT10223				TH		TM		6R
100 ppm Hydrogen Sulfide in Air	GMT10548				TH		TM		6R
10 ppm Hydrogen Sulfide in Nitrogen	GMT10207				TH		TM		6R
25 ppm Hydrogen Sulfide in Nitrogen	GMT10209				TH		TM		6R
40 ppm Hydrogen Sulfide in Nitrogen	GMT10583				TH		TM		6R
100 ppm Hydrogen Sulfide in Nitrogen	GMT10211				TH		TM		6R
Isobutylene									
50 ppm Isobutylene in Air	GMT10549	TK	TC	TB	TH	TG		TD	6R
100 ppm Isobutylene in Air	GMT10047	TK	TC	TB	TH	TG		TD	6R
Methane									
10 ppm Methane in Air	GMT10034	TK	TC	TB	TH	TG		TD	6R
100 ppm Methane in Air	GMT10035	TK	TC	TB	TH	TG		TD	6R
20 % LEL (1.0%) Methane in Air	GMT10038	TK	TC	TB	TH	TG		TD	6R
30 % LEL (1.5%) Methane in Air	GMT10550	TK	TC	TB	TH	TG		TD	6R
50 % LEL (2.5%) Methane in Air	GMT10039	TK	TC	TB	TH	TG		TD	6R
1 % Methane in Nitrogen	GMT10338	TK	TC	TB	TH	TG		TD	6R
5 % Methane in Nitrogen	GMT10551	TK	TC	TB	TH	TG		TD	6R
Nitric Oxide									
10 ppm Nitric Oxide in Nitrogen	GMT10212				TH		TM	6R	
25 ppm Nitric Oxide in Nitrogen	GMT10214				TH		TM	6R	
50 ppm Nitric Oxide in Nitrogen	GMT10215				TH		TM	6R	
Nitrogen Dioxide									
5 ppm Nitrogen Dioxide in Air	GMT10552				TH		TM	6R	
10 ppm Nitrogen Dioxide in Air	GMT10554				TH		TM	6R	
20 ppm Nitrogen Dioxide in Air	GMT10556				TH		TM	6R	
5 ppm Nitrogen Dioxide in Nitrogen	GMT10553				TH		TM	6R	
10 ppm Nitrogen Dioxide in Nitrogen	GMT10555				TH		TM	6R	
20 ppm Nitrogen Dioxide in Nitrogen	GMT10557				TH		TM	6R	
Oxygen									
20.9 % Oxygen in Nitrogen	GMT10584	TK	TC	TB	TH	TG		TD	6R
Pentane									
25 % LEL (0.35%) Pentane in Air	GMT10558	TK	TC	TB	TH	TG		TD	6R
50 % LEL (0.70%) Pentane in Air	GMT10559	TK	TC	TB	TH	TG		TD	6R
Propane									
10 ppm Propane in Air	GMT10560	TK	TC	TB	TH	TG		TD	6R
30 % LEL (0.63%) Propane in Air	GMT10561	TK	TC	TB	TH	TG		TD	6R
50 % LEL (1.05%) Propane in Air	GMT10562	TK	TC	TB	TH	TG		TD	6R

Ordering Information

When ordering, use base code plus cylinder designation suffix for the appropriate cylinder type.
 Ex: GMT10002TH is for Air Ultra Zero Certified in a MicroMAT™-58 Cylinder

Note: See Cylinder Specifications Chart on page 2 for description of cylinders.





6 Two Component Mixtures (continued)

Product Description	Base Code	MicroMAT™/MiniMAT™ Cylinders							
		10	14	17	58	105	116	221	6R
Sulfur Dioxide									
25 ppm Sulfur Dioxide in Air	GMT10228				TH		TM		6R
50 ppm Sulfur Dioxide in Air	GMT10229				TH		TM		6R
10 ppm Sulfur Dioxide in Nitrogen	GMT10563				TH		TM		6R
25 ppm Sulfur Dioxide in Nitrogen	GMT10564				TH		TM		6R
50 ppm Sulfur Dioxide in Nitrogen	GMT10565				TH		TM		6R
100 ppm Sulfur Dioxide in Nitrogen	GMT10566				TH		TM		6R

Multicomponent Mixtures

Product Description	Base Code	MicroMAT™/MiniMAT™ Cylinders							
		10	14	17	58	105	116	221	6R
Carbon Monoxide, Methane in Air									
50 ppm Carbon Monoxide 50 % LEL (2.5%) Methane	GMT10567	TK		TB	TH	TG		TD	6R
250 ppm Carbon Monoxide 50 % LEL (2.5%) Methane	GMT10568	TK		TB	TH	TG		TD	6R
Carbon Monoxide, Pentane in Air									
50 ppm Carbon Monoxide 30 % LEL (0.42%) Pentane	GMT10569	TK		TB	TH	TG		TD	6R
Carbon Monoxide, Propane in Air									
50 ppm Carbon Monoxide 50 % LEL (1%) Propane	GMT10570	TK		TB	TH	TG		TD	6R
Carbon Monoxide, Methane, Oxygen in Nitrogen									
100 ppm Carbon Monoxide 50 % LEL (2.5%) Methan 19 % Oxygen	GMT10571	TK		TB	TH	TG		TD	6R
Carbon Monoxide, Pentane, Oxygen in Nitrogen									
50 ppm Carbon Monoxide 25 % LEL (0.35%) Pentan 20.9 % Oxygen	GMT10572	TK		TB	TH	TG		TD	6R
100 ppm Carbon Monoxide 25 % LEL (0.35%) Pentane 19 % Oxygen	GMT10573	TK		TB		TG		TD	6R
Carbon Monoxide, Methane, Hydrogen Sulfide in Air									
50 ppm Carbon Monoxide 50 % LEL (2.5%) Methane 25 ppm Hydrogen Sulfide	GMT10574				TH		TM		6R

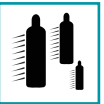
Ordering Information

When ordering, use base code plus cylinder designation suffix for the appropriate cylinder type.

Ex: GMT10002TH is for Air Ultra Zero Certified in a MicroMAT™-58 Cylinder

Note: See Cylinder Specifications Chart on page 2 for description of cylinders.





Multicomponent Mixtures (continued)

Product Description	Base Code	MicroMAT™/MiniMAT™ Cylinders							
		10	14	17	58	105	116	221	6R
Carbon Monoxide, Pentane, Hydrogen Sulfide in Air 50 ppm Carbon Monoxide 30 % LEL (0.42%) Pentane 25 ppm Hydrogen Sulfide	GMT10575				TH		TM		6R
Carbon Monoxide, Methane, Hydrogen Sulfide, Oxygen in Nitrogen 50 ppm Carbon Monoxide 25 % LEL (1.25%) Methane 25 ppm Hydrogen Sulfide 18 % Oxygen	GMT10576				TH		TM		6R
100 ppm Carbon Monoxide 50 % LEL (2.5%) Methane 25 ppm Hydrogen Sulfide 20.8 % Oxygen	GMT10577				TH		TM		6R
250 ppm Carbon Monoxide 50 % LEL (2.5%) Methane 40 ppm Hydrogen Sulfide 21 % Oxygen	GMT10578				TH		TM		6R
300 ppm Carbon Monoxide 25 % LEL (1.25%) Methane 10 ppm Hydrogen Sulfide 15 % Oxygen	GMT10579				TH		TM		6R
Carbon Monoxide, Pentane, Hydrogen Sulfide, Oxygen in Nitrogen 100 ppm Carbon Monoxide 25 % LEL (0.35%) Pentane 25 ppm Hydrogen Sulfide 19 % Oxygen	GMT10580				TH		TM		6R
Methane, Oxygen in Nitrogen 50 ppm Methane 17 % Oxygen	GMT10581	TK	TC	TB	TH	TG		TD	6R
Pentane, Oxygen in Nitrogen 25 % LEL (0.35%) Pentane 19 % Oxygen	GMT10582	TK	TC	TB	TH	TG		TD	6R

Ordering Information

When ordering, use base code plus cylinder designation suffix for the appropriate cylinder type.
 Ex: GMT10002TH is for Air Ultra Zero Certified in a MicroMAT™-58 Cylinder

Note: See Cylinder Specifications Chart on page 2 for description of cylinders.

Don't see a product or cylinder size you need, call us to quote!



Analytical data is only as good as the products and instruments used in the research. Gas management needs to be flawless when it comes to running gas chromatographs. MATHESON is the specialty gas supplier that designs, engineers and manufactures both the specialty gas and gas delivery equipment critical to reliable operation of gas chromatographs. Our **Calibration Products for Laboratory Analysis** offer researchers and engineers portable solutions for GC support in the lab, plant or field.

How to find the Laboratory Analysis Calibration Products you need:

Our gas management products for GC work are offered as follows:

- Pure Gases
- Two Component Mixtures
- Multicomponent Mixtures

If you don't see your product listed, please call MATHESON for more information!

Pure Gases

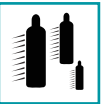
Product Description	Base Code	MicroMAT™/MiniMAT™ Cylinders							
		10	14	17	58	105	116	221	6R
Air Ultra Zero Certified	GMT10002				TH	TG			6R
Air Zero Gas	GMT10004	TK	TC		TH	TG		TD	6R
Argon, Ultra High Purity	GMT10006	TK	TC		TH	TG		TD	6R
n-Butane, CP	GMT10365		TC	TB					
Carbon Dioxide, Bone Dry	GMT10055	TK	TC		TH	TG		TD	6R
Ethane, CP	GMT10424		TC	TB				6R	
Ethylene, CP	GMT10426		TC	TB				6R	
Helium, Ultra High Purity	GMT10009	TK	TC		TH	TG		TD	6R
Hydrogen, Ultra High Purity	GMT10013		TC	TB				6R	
Isobutane, CP	GMT10427		TC	TB				6R	
Methane, Ultra High Purity	GMT10017		TC	TB				6R	
Nitrogen, Ultra High Purity	GMT10021		TC	TB	TH	TG		TD	6R
Nitrogen Zero Gas	GMT10022	TK	TC		TH	TG		TD	6R
Nitrous Oxide, CP	GMT10366		TC						
Oxygen Zero Gas	GMT10024		TC						
Propane, CP	GMT10367		TC	TB					
Propylene, CP	GMT10425		TC	TB					

Ordering Information

When ordering, use base code plus cylinder designation suffix for the appropriate cylinder type. Ex: GMT10002TH is for Air Ultra Zero Certified in a MicroMAT™-58 Cylinder

Note: See Cylinder Specifications Chart on page 2 for description of cylinders.





Calibration Products for Laboratory Analysis

Two Component Mixtures

Product Description	Base Code	MicroMAT™/MiniMAT™ Cylinders							
		10	14	17	58	105	116	221	6R
Acetylene									
1 % Acetylene in Helium	GMT10303		TC		TH				
1 % Acetylene in Nitrogen	GMT10304		TC		TH				
Ammonia									
50 ppm Ammonia in Nitrogen	GMT10220				TH		TM		6R
Benzene									
1 ppm Benzene in Air	GMT10307	TK	TC		TH	TG			6R
10 ppm Benzene in Air	GMT10306	TK	TC		TH	TG			6R
100 ppm Benzene in Air	GMT10305	TK	TC		TH	TG			6R
1,3-Butadiene									
10 ppm 1,3-Butadiene in Nitrogen	GMT10241				TH				6R
Carbon Dioxide									
100 ppm Carbon Dioxide in Helium	GMT10431	TK	TC		TH	TG			6R
1000 ppm Carbon Dioxide in Helium	GMT10331	TK	TC		TH	TG			6R
1 % Carbon Dioxide in Helium	GMT10308	TK	TC		TH	TG			6R
10 % Carbon Dioxide in Helium	GMT10319	TK	TC		TH	TG			6R
100 ppm Carbon Dioxide in Nitrogen	GMT10314	TK	TC		TH	TG			6R
1000 ppm Carbon Dioxide in Nitrogen	GMT10313	TK	TC		TH	TG			6R
1 % Carbon Dioxide in Nitrogen	GMT10309	TK	TC		TH	TG			6R
Ethane									
1.5 % Ethane in Air	GMT10032	TK	TC	TB	TH	TG		TD	6R
100 ppm Ethane in Helium	GMT10423	TK	TC	TB	TH	TG		TD	6R
1000 ppm Ethane in Helium	GMT10422	TK	TC	TB	TH	TG		TD	6R
1 % Ethane in Helium	GMT10421	TK	TC	TB	TH	TG		TD	6R
Ethylene									
8-10 ppm Ethylene in Air	GMT10354	TK	TC	TB	TH	TG		TD	6R
100 ppm Ethylene in Helium	GMT10325	TK	TC	TB	TH	TG		TD	6R
1000 ppm Ethylene in Helium	GMT10333	TK	TC	TB	TH	TG		TD	6R
8-10 ppm Ethylene in Nitrogen	GMT10322	TK	TC	TB	TH	TG		TD	6R
1000 ppm Ethylene in Nitrogen	GMT10334	TK	TC	TB	TH	TG		TD	6R
1 % Ethylene in Nitrogen	GMT10311	TK	TC	TB	TH	TG		TD	6R
Hydrogen									
100 ppm Hydrogen in Helium	GMT10330		TC	TB	TH	TG		TD	6R
100 ppm Hydrogen in Nitrogen	GMT10332	TK	TC	TB	TH	TG		TD	6R
1000 ppm Hydrogen in Nitrogen	GMT10335	TK	TC	TB	TH	TG		TD	6R
1 % Hydrogen in Nitrogen	GMT10328	TK	TC	TB	TH	TG		TD	6R
Isobutane									
100 ppm Isobutane in Air	GMT10045	TK	TC		TH	TG		6R	

Ordering Information

When ordering, use base code plus cylinder designation suffix for the appropriate cylinder type.
 Ex: GMT10002TH is for Air Ultra Zero Certified in a MicroMAT™-58 Cylinder

Note: See Cylinder Specifications Chart on page 2 for description of cylinders.





10 Two Component Mixtures (continued)

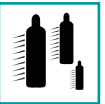
Product Description	Base Code	MicroMAT™/MiniMAT™ Cylinders							
		10	14	17	58	105	116	221	6R
Methane									
10 ppm Methane in Air	GMT10034	TK	TC		TH	TG			6R
100 ppm Methane in Air	GMT10035	TK	TC		TH	TG			6R
100 ppm Methane in Helium	GMT10337	TK	TC		TH				
1000 ppm Methane in Helium	GMT10336	TK	TC		TH				
1 % Methane in Helium	GMT10312	TK	TC		TH				
10 % Methane in Helium	GMT10320	TK	TC						
100 ppm Methane in Nitrogen	GMT10341	TK	TC		TH				
1000 ppm Methane in Nitrogen	GMT10339	TK	TC		TH				
1 % Methane in Nitrogen	GMT10338	TK	TC		TH				
10 % Methane in Nitrogen	GMT10321	TK	TC						
Nitrogen									
100 ppm Nitrogen in Helium	GMT10343	TK	TC		TH				
1000 ppm Nitrogen in Helium	GMT10340	TK	TC		TH				
1 % Nitrogen in Helium	GMT10315	TK	TC		TH				
Nitrous Oxide									
100 ppm Nitrous Oxide in Helium	GMT10345	TK	TC		TH				
1 % Nitrous Oxide in Helium	GMT10316	TK	TC		TH				
10 % Nitrous Oxide in Helium	GMT10323	TK	TC		TH				
0.1 ppm Nitrous Oxide in Nitrogen	GMT10302		TC		TH				
1 ppm Nitrous Oxide in Nitrogen	GMT10349	TK	TC		TH				
100 ppm Nitrous Oxide in Nitrogen	GMT10346	TK	TC		TH				
1000 ppm Nitrous Oxide in Nitrogen	GMT10342	TK	TC		TH				
Oxygen									
100 ppm Oxygen in Helium	GMT10353	TK	TC	TB	TH	TG		TD	6R
1 % Oxygen in Helium	GMT10317	TK	TC	TB	TH	TG		TD	6R
10 % Oxygen in Helium	GMT10324	TK	TC	TB	TH	TG		TD	6R
100 ppm Oxygen in Nitrogen	GMT10347	TK	TC	TB	TH	TG		TD	6R
1 % Oxygen in Nitrogen	GMT10318	TK	TC	TB	TH	TG		TD	6R
2 % Oxygen in Nitrogen	GMT10356	TK	TC	TB	TH	TG		TD	6R
6 % Oxygen in Nitrogen	GMT10357	TK	TC	TB	TH	TG		TD	6R
10 % Oxygen in Nitrogen	GMT10326	TK	TC	TB	TH	TG		TD	6R
19 % Oxygen in Nitrogen	GMT10042	TK	TC	TB	TH	TG		TD	6R
1,1,1-Trichloroethane									
10 ppm 1,1,1-Trichloroethane in Nitrogen	GMT10301		TC		TH				6R
Trichloroethylene									
10 ppm Trichloroethylene in Nitrogen	GMT10359		TC		TH				6R
Vinyl Chloride									
1 ppm Vinyl Chloride in Nitrogen	GMT10363				TH				6R
10 ppm Vinyl Chloride in Nitrogen	GMT10362				TH				6R
50 ppm Vinyl Chloride in Nitrogen	GMT10364		TC		TH				6R
100 ppm Vinyl Chloride in Nitrogen	GMT10360		TC		TH				6R
1000 ppm Vinyl Chloride in Nitrogen	GMT10361		TC		TH				6R

Ordering Information

When ordering, use base code plus cylinder designation suffix for the appropriate cylinder type.
 Ex: GMT10002TH is for Air Ultra Zero Certified in a MicroMAT™-58 Cylinder

Note: See Cylinder Specifications Chart on page 2 for description of cylinders.





Calibration Products for Laboratory Analysis

Multicomponent Mixtures

Product Description	Base Code	MicroMAT™/MiniMAT™ Cylinders							
		10	14	17	58	105	116	221	6R
BTEX Mixtures in Nitrogen									
Benzene, Ethyl Benzene, Toluene, Xylene									
1 ppm BTEX Mixture	GMT10231				TH				6R
10 ppm BTEX Mixture	GMT10417				TH				6R
100 ppb BTEX Mixture	GMT10232				TH				6R
C₂ to C₄ Alkyne in Nitrogen									
Acetylene, 1-Butyne, 2-Butyne, Propyne									
each at 15 ppm	GMT10412		TC		TH				6R
Methane, Ethane, Ethylene, Acetylene, Propane, Propylene, Propyne, n-Butane in Nitrogen each at 15 ppm									
	GMT10415		TC		TH				6R
n-Butane, Isobutane, cis-2-Butene, trans-2-Butene, 1-Butene, Isobutylene, 1,3-Butadiene, Ethyl Acetylene, in Nitrogen each at 15 ppm									
	GMT10416		TC		TH				6R
2-Olefin Mixtures in Nitrogen									
cis-2-Butene, trans-2-Butene, cis-2-Pentene									
trans-2-Pentene, cis-2-Hexene, trans-2-Hexene									
each at 15 ppm	GMT10351		TC		TH				6R
C₂ to C₆ Olefin Mixtures in Helium									
Ethylene, Propylene, 1-Butene, 1-Pentene, 1-Hexene, each at 100 ppm	GMT10414		TC		TH				6R
Ethylene, Propylene, 1-Butene, 1-Pentene, 1-Hexene, each at 1000 ppm	GMT10358		TC		TH				6R
C₂ to C₆ Olefin Mixtures in Nitrogen									
Ethylene, Propylene, 1-Butene, 1-Pentene, 1-Hexene, each at 100 ppm	GMT10413		TC		TH				6R
Ethylene, Propylene, 1-Butene, 1-Pentene, 1-Hexene, each at 1000 ppm	GMT10430		TC		TH				6R
C₁ to C₆ n-Paraffins Mixtures in Helium									
Methane, Ethane, Propane, Butane, Pentane, Hexane each at 100 ppm	GMT10409		TC		TH				6R
Methane, Ethane, Propane, Butane, Pentane, Hexane each at 1000 ppm	GMT10411		TC		TH				6R
C₁ to C₆ n-Paraffins Mixtures in Nitrogen									
Methane, Ethane, Propane, Butane, Pentane, Hexane each at 15 ppm	GMT10408	TK	TC	TB	TH	TG		TD	6R
Methane, Ethane, Propane, Butane, Pentane, Hexane each at 100 ppm	GMT10410	TK	TC	TB	TH	TG		TD	6R
Methane, Ethane, Propane, Butane, Pentane, Hexane each at 1000 ppm	GMT10411	TK	TC	TB	TH	TG		TD	6R
Branched Paraffins Mixtures in Nitrogen									
Isobutane, 2-Methylbutane, 2,2-Dimethylpropane, 2-Methylpentane, 3-Methylpentane, 2,2-Dimethylbutane									
each at 15 ppm	GMT10407		TC		TH				6R

Ordering Information

When ordering, use base code plus cylinder designation suffix for the appropriate cylinder type.

Ex: GMT10002TH is for Air Ultra Zero Certified in a MicroMAT™-58 Cylinder

Note: See Cylinder Specifications Chart on page 2 for description of cylinders.

Don't see a product or cylinder size you need, call us to quote!



12 Multicomponent Mixtures (continued)

Product Description	Base Code	MicroMAT™/MiniMAT™ Cylinders							
		10	14	17	58	105	116	221	6R
Carbon Monoxide, Carbon Dioxide in Nitrogen 25 ppm Carbon Monoxide 1000 ppm Carbon Dioxide	GMT10053		TC		TH				6R
Carbon Monoxide, Carbon Dioxide, Methane, Ethane, Ethylene, Acetylene in Nitrogen, each at 1 %	GMT10402	TK	TC	TB	TH	TG		TD	6R
Carbon Monoxide, Carbon Dioxide, Methane, Hydrogen, Oxygen in Nitrogen, each at 1 %	GMT10403	TK	TC	TB	TH	TG		TD	6R
Carbon Dioxide, Carbon Monoxide, Nitrogen, Oxygen, Methane, Hydrogen in Helium 5 % Carbon Dioxide 5 % Carbon Monoxide 5 % Nitrogen 4 % Oxygen 4 % Methane 4 % Hydrogen	GMT10404		TC	TB		TG			6R
Carbon Dioxide, Carbon Monoxide, Oxygen in Nitrogen 15 % Carbon Dioxide 7 % Carbon Monoxide 5 % Oxygen	GMT10348	TK	TC	TB	TH	TG		TD	6R
Carbon Dioxide, Carbon Monoxide, Oxygen, Methane in Nitrogen 15 % Carbon Dioxide 7 % Carbon Monoxide 5 % Oxygen 4.5 % Methane	GMT10406	TK	TC	TB	TH	TG		TD	6R
Carbon Dioxide, Carbon Monoxide, Oxygen, Hydrogen in Nitrogen, each at 0.5%	GMT10401	TK	TC	TB	TH	TG		TD	6R
Carbon Dioxide, Carbon Monoxide, Oxygen, Hydrogen in Nitrogen 0.5 % Carbon Dioxide 0.5 % Carbon Monoxide 0.5 % Oxygen 5 % Hydrogen	GMT10428	TK	TC	TB	TH	TG		TD	6R
Carbon Dioxide, Oxygen in Nitrogen 1 % Carbon Dioxide 1 % Oxygen	GMT10429	TK	TC	TB	TH	TG		TD	6R
1 % Carbon Dioxide 2 % Oxygen	GMT10420	TK	TC	TB	TH	TG		TD	6R
2 % Carbon Dioxide 24 % Oxygen	GMT10350	TK	TC	TB	TH	TG		TD	6R
3 % Carbon Dioxide 17 % Oxygen	GMT10352	TK	TC	TB	TH	TG		TD	6R

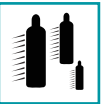
Ordering Information

When ordering, use base code plus cylinder designation suffix for the appropriate cylinder type.

Ex: GMT10002TH is for Air Ultra Zero Certified in a MicroMAT™-58 Cylinder

Note: See Cylinder Specifications Chart on page 2 for description of cylinders.





MATHESON Calibration Products for Air Toxics Monitoring are designed to meet Method TO-14 Standards set forth by the US EPA. These mixes are blended by gravimetric blending techniques and are available at 1 ppm or 100 ppb concentration

for each analyte in VOC Free Nitrogen. Analytical results are verified by GCMS techniques. Mixes consisting of two components or multicomponents can be produced depending on your specific requirements.

Toxi-MAT-14™ 40 Component Mixture for EPA Method TO-14

Benzene	cis-1,2-Dichloroethylene	Toluene
Benzyl chloride	1,2-Dichloropropane	1,2,4-Trichlorobenzene
Carbon tetrachloride	cis-1,3-Dichloropropene	1,1,1-Trichloroethane
Chlorobenzene	trans-1,3-Dichloropropene	1,1,2-Trichloroethane
Chloroform	1,2-Dichlorotetrafluoroethane	Trichloroethylene
1,2-Dibromoethane	Ethyl chloride	Trichlorofluoromethane
m-Dichlorobenzene	Ethylbenzene	1,1,2-Trichlorotrifluoroethane
o-Dichlorobenzene	Hexachloro-1,3-Butadiene	1,2,4-Trimethylbenzene
p-Dichlorobenzene	Methyl bromide	1,3,5-Trimethylbenzene
Dichlorodifluoromethane	Methyl chloride	Vinyl chloride
1,1-Dichloroethane	Methylene chloride	m-Xylene
1,2-Dichloroethane	Styrene	o-Xylene
1,1-Dichloroethylene	1,1,2,2-Tetrachloroethane	p-Xylene
	Tetrachloroethylene	Balance VOC Free Nitrogen

Available in 1 ppm and 100 ppb concentration. 12 month shelf-life

NOTE: Toxi-MAT™ 14 is a 40 Component Mixture containing Benzyl Chloride

Cylinder Size	Cylinder Pressure (psi)	Contents		1 ppm	100 ppb
		US	Metric	Item Code	Item Code
6R	1,775	3.65 ft ³	103L	G0819453	G0819553

Ordering Information

When ordering, use base code plus cylinder designation suffix for the appropriate cylinder type.
 Ex: GMT10002TH is for Air Ultra Zero Certified in a MicroMAT™-58 Cylinder

Note: See Cylinder Specifications Chart on page 2 for description of cylinders.

Don't see a product or cylinder size you need, call us to quote!



Toxi-MAT-15™ Calibration Standard; 62 Minor Components

Acetone	cis-1,2-Dichloroethylene	2-Propanol
Benzene	trans-1,2-Dichloroethylene	Propylene
Benzyl chloride	1,2-Dichloropropane	Styrene
Bromoform	Cis-1,3-Dichloropropene	1,1,2-Tetrachloroethane
Bromodichloromethane	Trans-1,3-Dichloropropene	Tetra Chloroethylene
1,3-Butadiene	1,2-Dichlorotetrafluoroethane (Freon 114)	Tetrahydrofuran
2-Butanone (MEK)	1,4-Dioxane	Toluene
Carbon disulfide	Ethanol	1,2,4-Trichlorobenzene
Carbon tetrachloride	Ethyl acetate	1,1,1-Trichloroethane
Chlorobenzene	Ethyl chloride (Chloroethane)	1,1,2-Trichloroethane
Chloroform	Ethylbenzene	Trichloroethylene
Cyclohexane	4-Ethyltoluene (p-ethyltoluene)	Trichlorofluoromethane (Freon 11)
Dibromochloromethane	Heptane	1,1,2-Trichlorotrifluoroethane (Freon 113)
1,2-Dibromoethane (Ethylene dibromide)	Hexane	1,2,4-Trimethylbenzene
m-Dichlorobenzene (1,3)	2-Hexanone (MBK)	1,3,5-Trimethylbenzene
o-Dichlorobenzene (1,2)	Hexachloro-1,3-Butadiene(Hexachlorobutadiene)	Vinyl acetate
p-Dichlorobenzene (1,4)	4-Methyl-2-Pentanone (MIBK)	Vinyl chloride
Dichlorodifluoromethane (Freon 12)	Methyl bromide (Bromomethane)	m-Xylene
1,1-Dichloroethane	Methyl chloride (Chloromethane)	o-Xylene
1,2-Dichloroethane	Methylene chloride	p-Xylene
1,1-Dichloroethylene	MTBE	Balance VOC Free Nitrogen

Available in 1 ppm concentration. 6 month shelf-life

Cylinder Size	Cylinder Pressure (psi)	Contents		1 ppm Item Code
		US	Metric	
6R	1,775	3.65 ft ³	103L	G2660004

Toxi-MAT-15™ Subset Mixture for EPA Method TO-15

Acetonitrile	Methanol
Acrylonitrile	Methyl ethyl ketone (2-Butanone or MEK)
Benzyl Chloride	Methyl isobutyl ketone (4-Methyl-2-Pentanone or MIBK)
Bis(2-chloroethyl) ether	Methyl methacrylate
Bis(chloromethyl) ether	2,2,4-Trimethylpentane
1,3-Butadiene	2,3,4-Trimethylpentane
3-Chloroprene	Vinyl acetate
Ethyl acrylate	Vinyl bromide
Ethyl bromide	Balance VOC Free Nitrogen
Hexane	

Available in 1 ppm concentration. 12 month shelf-life.

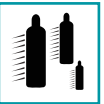
Cylinder Size	Cylinder Pressure (psi)	Contents		1 ppm Item Code
		US	Metric	
6R	1,775	3.65 ft ³	103L	G0820053

Ordering Information

When ordering, use base code plus cylinder designation suffix for the appropriate cylinder type.
 Ex: GMT10002TH is for Air Ultra Zero Certified in a MicroMAT™-58 Cylinder

Note: See Cylinder Specifications Chart on page 2 for description of cylinders.





Calibration Products for Air Toxics Monitoring

Aro-MAT™ Calibration Standard

Benzene	Ethylbenzene	m-Xylene
Chlorobenzene	Styrene	o-Xylene
m-Dichlorobenzene	1,2,4-Trichlorobenzene	p-Xylene
o-Dichlorobenzene	1,2,4-Trimethylbenzene	Balance VOC Free Nitrogen
p-Dichlorobenzene	1,3,5-Trimethylbenzene	

Cylinder Size	Cylinder Pressure (psi)	Contents		1 ppm Item Code	100 ppb Item Code
		US	Metric		
6R	1,775	3.65 ft ³	103L	G0819653	G0819753

Chloro-MAT™ Calibration Standard

Carbon Tetrachloride	cis-1,3-Dichloropropene	Tetrachloroethylene
Chloroform	trans-1,3-Dichloropropene	1,1,1-Trichloroethane
1,1-Dichloroethane	Ethyl chloride	1,1,2-Trichloroethane
1,2-Dichloroethane	hexachloro-1,3-butadiene	Trichloroethylene
1,1-Dichloroethylene	Methyl chloride	Vinyl chloride
cis-1,2-Dichloroethylene	Methylene chloride	Balance VOC Free Nitrogen
1,2-dichloropropane	1,1,2,2-Tetrachloroethane	

Cylinder Size	Cylinder Pressure (psi)	Contents		1 ppm Item Code	100 ppb Item Code
		US	Metric		
6R	1,775	3.65 ft ³	103L	G0818053	G0818153

Chromo-MAT-1™ Calibration Standard

Bromochloromethane	1,4-Difluorobenzene
4-Bromofluorobenzene	Balance VOC Free Nitrogen
Chlorobenzene-d5	

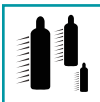
Cylinder Size	Cylinder Pressure (psi)	Contents		1 ppm Item Code	100 ppb Item Code
		US	Metric		
6R	1,775	3.65 ft ³	103L	G0818453	G0818553

Ordering Information

When ordering, use base code plus cylinder designation suffix for the appropriate cylinder type.
 Ex: GMT10002TH is for Air Ultra Zero Certified in a MicroMAT™-58 Cylinder

Note: See Cylinder Specifications Chart on page 2 for description of cylinders.





Chromo-MAT-2™ Calibration Standard

4-Bromofluorobenzene Balance VOC Free Nitrogen

Cylinder Size	Cylinder Pressure (psi)	Contents		1 ppm Item Code	100 ppb Item Code
		US	Metric		
6R	1,775	3.65 ft ³	103L	G0818253	G0818353

Chromo-MAT-3™ Calibration Standard

Bromochloromethane 1,4-Difluorobenzene
Chlorobenzene-d5 Balance VOC Free Nitrogen

Cylinder Size	Cylinder Pressure (psi)	Contents		1 ppm Item Code	100 ppb Item Code
		US	Metric		
6R	1,775	3.65 ft ³	103L	G0818653	G0818753

Fluoro-MAT™ Calibration Standard

Dichlorodifluoromethane 1,2-Dichlorotetrafluoroethane
Trichlorofluoromethane Balance VOC Free Nitrogen

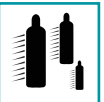
Cylinder Size	Cylinder Pressure (psi)	Contents		1 ppm Item Code	100 ppb Item Code
		US	Metric		
6R	1,775	3.65 ft ³	103L	G0819053	G0819153

Ordering Information

When ordering, use base code plus cylinder designation suffix for the appropriate cylinder type.
Ex: GMT10002TH is for Air Ultra Zero Certified in a MicroMAT™-58 Cylinder

Note: See Cylinder Specifications Chart on page 2 for description of cylinders.

Don't see a product or cylinder size you need, call us to quote!



MiniMAT™ PELgas™ Program



MATHESON developed the PELgas™ program to provide our customers with the highest quality, most convenient and cost-effective calibration standards for Permissible Exposure Limit Monitors.

The PELgas™ program was designed with the environment in mind. PELgas™ mixtures are available with a variety of reactive and nonreactive gas components, traceable to NIST Standard Reference Material. Calibration standards are provided in the MiniMAT™ refillable cylinder that is lightweight (weighing less than 2 lbs.) and very portable. These cylinders are a great alternative to disposable cylinders because the cylinder is continuously reused. In most cases, a MiniMAT™ cylinder contains twice as much product as a normal disposable, rendering fewer changeouts.

To save our customers time and money, MATHESON introduced the "Drop and Swap" program for PELgas™. This program is designed to assist the user in shipping empty cylinders to and from a MATHESON facility in a timely, low-cost fashion. The program is simple to use:

1. The customer can buy or rent the cylinder
2. When the cylinder is empty, the customer returns the cylinder to MATHESON, in convenient return package
3. MATHESON returns a full MiniMAT™ PELgas™ cylinder from our stocked inventory

All shipping is handled via FedEx. The Drop and Swap program eliminates rental, disposal, shipping and freight fees. Since everything is based on an even exchange, the number of cylinders stored at your site becomes limited.

MATHESON stocks and inventories each of the following calibration gases. If you do not see the PELgas™ for your application, please contact MATHESON.

Note: 6R can be rented by adding an "R" at the end of item code.

Zero Calibration Gases

Gas	Grade	Item Code*	Contents
Air	Zero	G1800298	102 L
Nitrogen	Zero	G2056598	102 L

Two Component Calibration Gases

Benzene PELgas™ Calibration Standards

Concentration	Balance Gas	Item Code*	Contents
1 ppm	Air	G2659274	102 L

1,3-Butadiene PELgas™ Calibration Standards

Concentration	Balance Gas	Item Code*	Contents
0.5 ppm	Nitrogen	G0863398	102 L
1 ppm	Nitrogen	G0863498	102 L

n-Butane PELgas™ Calibration Standards

Concentration	Balance Gas	Item Code*	Contents
0.9 % (50 % LEL)	Air	G2658863	102 L

Carbon Dioxide PELgas™ Calibration Standards

Concentration	Balance Gas	Item Code*	Contents
1000 ppm	Air	G2658869	102 L
2000 ppm	Air	G2658870	102 L

Carbon Monoxide PELgas™ Calibration Standards

Concentration	Balance Gas	Item Code*	Contents
35 ppm	Air	G0861898	102 L
50 ppm	Air	G0861998	102 L
100 ppm	Air	G0862098	102 L
200 ppm	Air	G0863698	102 L
400 ppm	Air	G0863798	102 L

Ethane PELgas™ Calibration Standards

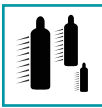
Concentration	Balance Gas	Item Code*	Contents
1.5% (50% LEL)	Air	G0864398	102 L

Hexane PELgas™ Calibration Standards

Concentration	Balance Gas	Item Code*	Contents
400 ppm	Air	G0862198	102 L
0 - 48%	Air	G0862298	18 L

Hydrogen PELgas™ Calibration Standards

Concentration	Balance Gas	Item Code*	Contents
1% (25% LEL)	Air	G2659225	102 L
2% (50% LEL)	Air	G0861798	102 L



18 MiniMAT™ PELgas™ Program (continued)

Two Component Calibration Gases
(continued)

Hydrogen Sulfide PELgas™ Calibration Standards

Concentration	Balance Gas	Item Code*	Contents
5 ppm	Nitrogen	G2658875	102 L
10 ppm	Nitrogen	G0863598	102 L
15 ppm	Nitrogen	G2658876	102 L
20 ppm	Nitrogen	G0863998	102 L
25 ppm	Nitrogen	G0862698	102 L
50 ppm	Nitrogen	G0862798	102 L
100 ppm	Nitrogen	G0863898	102 L

Isobutylene PELgas™ Calibration Standards

Concentration	Balance Gas	Item Code*	Contents
100 ppm	Air	G2658829	102 L

Methane PELgas™ Calibration Standards

Concentration	Balance Gas	Item Code*	Contents
10 ppm	Air	G2658872	102 L
100 ppm	Air	G2658830	102 L
500 ppm	Air	G2658873	102 L
0.5% (10% LEL)	Air	G0861098	92 L
0.75% (15% LEL)	Air	G0861198	92 L
1.0% (20% LEL)	Air	G0861298	92 L
2.5% (50% LEL)	Air	G0861398	92 L
2.9% (58% LEL)	Air	G0861498	92 L
2.09% (40% LEL)	Air	G2671796	92 L

Nitric Oxide PELgas™ Calibration Standards

Concentration	Balance Gas	Item Code*	Contents
20 ppm	Nitrogen	G0862898	102 L
50 ppm	Nitrogen	G0862998	102 L
75 ppm	Nitrogen	G0863098	102 L

Nitrogen Dioxide PELgas™ Calibration Standards

Concentration	Balance Gas	Item Code*	Contents
10 ppm	Air	G2658458	102 L
20 ppm	Air	G2658462	102 L

Oxygen PELgas™ Calibration Standards

Concentration	Balance Gas	Item Code*	Contents
1 %	Nitrogen	G2658393	102 L
2 %	Nitrogen	G2658394	102 L
8.5 %	Nitrogen	G2658395	102 L
18 %	Nitrogen	G2671947	102 L
20 %	Nitrogen	G2658396	102 L

Pentane PELgas™ Calibration Standards

Concentration	Balance Gas	Item Code*	Contents
0.7% (50% LEL)	Air	G0864498	46 L

Propane PELgas™ Calibration Standards

Concentration	Balance Gas	Item Code*	Contents
266 ppm	Air	G0861598	102 L
0.5% (23.8% LEL)	Air	G2658867	92 L
1% (48% LEL)	Air	G2658866	92 L
1.05% (50% LEL)	Air	G0861698	92 L

Sulfur Dioxide PELgas™ Calibration Standards

Concentration	Balance Gas	Item Code*	Contents
5 ppm	Nitrogen	G2658242	102 L
20 ppm	Nitrogen	G0863198	102 L
35 ppm	Nitrogen	G0863298	102 L

Multicomponent Calibration Mixtures

Component	Concentration	Item Code*	Contents
Methane	1.45 %	G0862398	94 L
Oxygen	15 %		
Nitrogen	Balance		

Component	Concentration	Item Code*	Contents
Carbon Monoxide	50 ppm	G0862498	94 L
Methane	1.25 %		
Oxygen	18 %		
Nitrogen	Balance		

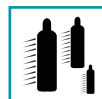
Component	Concentration	Item Code*	Contents
Carbon Monoxide	100 ppm	G0862598	94 L
Methane	2.5 %		
Oxygen	18 %		
Nitrogen	Balance		

Four Gas Mixtures

Item Code	Carbon Monoxide	Hydrogen Sulfide	Methane	Pentane	Oxygen	Balance Gas	Contents
GMT105776R	100 ppm	25 ppm	50% LEL	—	21%	Nitrogen	102 L
GMT105796R	300 ppm	10 ppm	25% LEL	—	15%	Nitrogen	102 L
GMT105766R	50 ppm	25 ppm	25% LEL	—	18%	Nitrogen	102 L
GMT105806R	100 ppm	25 ppm	—	25% LEL	19%	Nitrogen	102 L

Other component concentrations readily available. Please inquire.

Note: 6R can be rented by adding an "R" at the end of the item code.

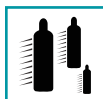


Pure Gases in MATHESON Lecture Bottles

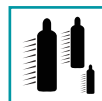
The MATHESON Lecture Bottle is the original transportable cylinder. Currently, MATHESON provides many of our Pure Gases in lecture bottles. The lecture bottle can hold just about any gas

that is available including hydrocarbons, free & inert gases, chemical and corrosive gases.

Gas	Grade	Item Code	Contents		Cylinder Pressure psig @70°F	Valve Outlet CGA No.
			US	Metric		
Air	Ultra Zero	G2001375	2 ft ³	56 L	1,775	170
Ammonia	Anhydrous	G1501275	0.375 lb	170 gm	114	170
Argon	MATHESON	G1811181	1.9 ft ³	54 L	1,800	580
	Ultra High Purity	G1901175	1.8 ft ³	52 L	1,775	170
Boron Trichloride	CP	G1502186	1 lb	454 gm	4	180
Boron Trifluoride	CP	G1503175	0.375 lb	170 gm	1,600	180
1,3 Butadiene	Instrument	G2429175	0.375 lb	170 gm	21	170
	CP	G1311175	0.375 lb	170 gm	21	170
n-Butane	Ultra High Purity	G1905075	0.375 lb	170 gm	17	170
	Instrument	G2423175	0.375 lb	170 gm	17	170
	CP	G1317275	0.375 lb	170 gm	17	170
1-Butene	CP	G1323175	0.375 lb	170 gm	23	170
2-Butene (<i>cis & trans</i>)	Technical	G1338175	0.375 lb	170 gm	14	170
2-Butene (<i>cis</i>)	Technical	G1328175	0.375 lb	170 gm	13	170
2-Butene (<i>trans</i>)	Technical	G1333175	0.375 lb	170 gm	15	170
Carbon Dioxide	CP	G1123175	0.5 lb	227 gm	838	170
	Anaerobe Purity	G1123275	0.5 lb	227 gm	838	170
Carbon Monoxide	Ultra High Purity	G1918775	1.6 ft ³	45 L	1,500	170
	CP	G1132275	1.6 ft ³	45 L	1,500	170
	Technical	G1132175	1.6 ft ³	45 L	1,500	170
Chlorine	Ultra High Purity	G1919175	1 lb	454 gm	85	180
Dimethylamine	CP	G1522175	0.375 lb	170 gm	26	180
Dimethylether	CP	G1410175	0.375 lb	170 gm	62	170
Ethane	Research	G2243181	0.33 lb	150 gm	543	350
	MATHESON	G1827181	0.33 lb	150 gm	543	350
	Ultra High Purity	G1920175	0.25 lb	113 gm	544	170
	CP	G1353275	0.25 lb	113 gm	544	170
	Technical	G1353175	0.25 lb	113 gm	544	170
Ethylene	Research	G2250181	0.31 lb	140 gm	1,200	350
	MATHESON	G1827182	0.31 lb	140 gm	1,200	350
	Ultra High Purity	G1920875	0.25 lb	113 gm	1,200	170
	CP	G1358275	0.25 lb	113 gm	1,200	170
	Technical	G1358175	0.25 lb	113 gm	1,200	170
	Polymer	G1358475	0.25 lb	113 gm	1,200	170
Helium	Ultra High Purity	G1929175	1.8 ft ³	52 L	1,775	170
Hexafluoropropylene	CP	G1466675	1 lb	454 gm	85	170
Hydrogen	Ultra High Purity	G1939175	1.8 ft ³	52 L	1,775	170
Hydrogen Bromide	CP	G1528175	1 lb	454 gm	320	180
Hydrogen Chloride	Technical	G1531175	0.5 lb	227 gm	613	180
Hydrogen Fluoride	Ultra High Purity	G1534175	0.5 lb	227 gm	1	180
	CP	G1534375	0.5 lb	227 gm	1	180
Hydrogen Sulfide	CP	G1540275	0.5 lb	227 gm	252	180
	Technical	G1540175	0.5 lb	227 gm	252	180

**20 Pure Gases in MATHESON Lecture Bottles (continued)**

Gas	Grade	Item Code	Contents		Cylinder Pressure psig @70°F	Valve Outlet CGA No.
			US	Metric		
Isobutane	Research	G2257181	0.44 lb	200 gm	31	510
	Ultra High Purity	G1931175	0.375 lb	170 gm	31	170
	Instrument	G2457175	0.375 lb	170 gm	31	170
	CP	G1363175	0.375 lb	170 gm	31	170
Isobutylene	CP	G1365175	0.375 lb	170 gm	24	170
Methane	Research	G2271181	1.9 ft ³	54 L	1,800	350
	MATHESON	G1861181	1.9 ft ³	54 L	1,800	350
	Ultra High Purity	G1949175	1.8 ft ³	52 L	1,775	170
Methyl Chloride	CP	G1471175	0.5 lb	227 gm	73	170
Methyl Mercaptan	CP	G1546175	0.5 lb	227 gm	15	180
Monomethylamine	CP	G1552175	0.375 lb	170 gm	29	180
Neon	Ultra High Purity	G1159275	0.88 ft ³	25 L	825	180
Nitrogen	MATHESON	G1881181	1.9 ft ³	54 L	1,800	580
	Ultra High Purity	G1959175	1.8 ft ³	52 L	1,775	170
Nitrous Oxide	Ultra High Purity	G1969175	0.5 lb	227 gm	745	170
	CP	G1570175	0.5 lb	227 gm	745	170
Oxygen	MATHESON	G1885181	1.7 ft ³	47 L	1,600	540
	Ultra High Purity	G1979175	1.7 ft ³	47 L	1,600	170
Propane	Research	G2285181	0.38 lb	175 gm	109	510
	Ultra High Purity	G1980575	0.313 lb	142 gm	110	170
	Instrument	G2471175	0.313 lb	142 gm	110	170
Propylene	MATHESON	G1887181	0.38 lb	175 gm	136	510
	Ultra High Purity	G1981375	0.313 lb	142 gm	133	170
Sulfur Dioxide	Anhydrous	G1585275	1 lb	454 gm	34	180
Sulfur Hexafluoride	Instrument	G2485175	0.5 lb	227 gm	320	170
	CP	G1186175	0.5 lb	227 gm	320	170
Sulfur Tetrafluoride	CP	G1588275	1 lb	454 gm	140	180
Trimethylamine	CP	G1594175	0.375 lb	170 gm	13.3	180
Xenon	Research	G2191175	0.88 ft ³	25 L	600	580



Pure Gases

Product Description	Base Code	MicroMAT™/MiniMAT™ Cylinders							
		10	14	17	58	105	116	221	6R
Air Ultra Zero Certified	GMT10002				TH	TG			6R
Air Zero Gas	GMT10004	TK	TC	TB	TH	TG		TD	6R
Argon, Ultra High Purity	GMT10006	TK	TC	TB	TH	TG		TD	6R
n-Butane, CP	GMT10365		TC	TB					
Carbon Dioxide, Bone Dry	GMT10055	TK	TC		TH	TG		TD	6R
Ethane, CP	GMT10424		TC	TB					
Ethylene, CP	GMT10426		TC	TB					
Helium, Ultra High Purity	GMT10009	TK	TC	TB	TH	TG		TD	6R
Hydrogen, Ultra High Purity	GMT10013		TC	TB					
Isobutane, CP	GMT10427		TC	TB				TD	
Methane, CP	GMT10015		TC	TB					
Methane, Ultra High Purity	GMT10017		TC	TB					
Nitrogen, Ultra High Purity	GMT10021		TC	TB	TH	TG		TD	6R
Nitrogen Zero Gas	GMT10022	TK	TC	TB	TH	TG		TD	6R
Nitrous Oxide, CP	GMT10366		TC						
Oxygen Zero Gas	GMT10024		TC						
Propane, CP	GMT10367		TC	TB					
Propylene, CP	GMT10425		TC	TB					

Two Component Mixtures

Product Description	Base Code	MicroMAT™/MiniMAT™ Cylinders							
		10	14	17	58	105	116	221	6R
Acetylene									
1 % Acetylene in Helium	GMT10303		TC		TH				
1 % Acetylene in Nitrogen	GMT10304		TC		TH				
Ammonia									
25 ppm Ammonia in Nitrogen	GMT10519				TH		TM		6R
50 ppm Ammonia in Nitrogen	GMT10220				TH		TM		6R
200 ppm Ammonia in Nitrogen	GMT10520				TH		TM		6R
Benzene									
1 ppm Benzene in Air	GMT10307	TK	TC		TH	TG			6R
10 ppm Benzene in Air	GMT10306	TK	TC		TH	TG			6R
100 ppm Benzene in Air	GMT10305	TK	TC		TH	TG			6R
1,3-Butadiene									
10 ppm 1,3-Butadiene in Nitrogen	GMT10241				TH				6R
Carbon Dioxide									
100 ppm Carbon Dioxide in Air	GMT10521	TK	TC	TB	TH	TG		TD	6R
1000 ppm Carbon Dioxide in Air	GMT10025	TK	TC	TB	TH	TG		TD	6R
5 % Carbon Dioxide in Air	GMT10522	TK	TC	TB	TH	TG		TD	6R
100 ppm Carbon Dioxide in Helium	GMT10431	TK	TC		TH	TG		6R	
1000 ppm Carbon Dioxide in Helium	GMT10331	TK	TC		TH	TG		6R	
1 % Carbon Dioxide in Helium	GMT10308	TK	TC		TH	TG		6R	
10 % Carbon Dioxide in Helium	GMT10319	TK	TC		TH	TG		6R	
100 ppm Carbon Dioxide in Nitrogen	GMT10314	TK	TC		TH	TG		6R	
1000 ppm Carbon Dioxide in Nitrogen	GMT10313	TK	TC	TB	TH	TG		TD	6R

Ordering Information

When ordering, use base code plus cylinder designation suffix for the appropriate cylinder type.
Ex: GMT10002TH is for Air Ultra Zero Certified in a MicroMAT™-58 Cylinder

Note: See Cylinder Specifications Chart on page 2 for description of cylinders.





Complete Gas Listing

22 Two Component Mixtures (continued)

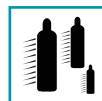
Product Description	Base Code	MicroMAT™/MiniMAT™ Cylinders							
		10	14	17	58	105	116	221	6R
Carbon Dioxide (continued)									
1 % Carbon Dioxide in Nitrogen	GMT10309	TK	TC		TH	TG		6R	
2.5 % Carbon Dioxide in Nitrogen	GMT10523	TK	TC	TB	TH	TG		TD	6R
5 % Carbon Dioxide in Nitrogen	GMT10524	TK	TC	TB	TH	TG		TD	6R
10 % Carbon Dioxide in Nitrogen	GMT10525	TK	TC	TB	TH	TG		TD	6R
Carbon Monoxide									
20 ppm Carbon Monoxide in Air	GMT10526	TK		TB	TH	TG		TD	6R
25 ppm Carbon Monoxide in Air	GMT10527	TK		TB	TH	TG		TD	6R
40 ppm Carbon Monoxide in Air	GMT10528	TK		TB	TH	TG		TD	6R
50 ppm Carbon Monoxide in Air	GMT10028	TK		TB	TH	TG		TD	6R
60 ppm Carbon Monoxide in Air	GMT10529	TK		TB	TH	TG		TD	6R
100 ppm Carbon Monoxide in Air	GMT10029	TK		TB	TH	TG		TD	6R
200 ppm Carbon Monoxide in Air	GMT10030	TK		TB	TH	TG		TD	6R
300 ppm Carbon Monoxide in Air	GMT10530	TK		TB	TH	TG		TD	6R
50 ppm Carbon Monoxide in Nitrogen	GMT10531	TK		TB	TH	TG		TD	6R
1000 ppm Carbon Monoxide in Nitrogen	GMT10532	TK		TB	TH	TG		TD	6R
Chlorine									
3 ppm Chlorine in Nitrogen	GMT10533				TH				
5 ppm Chlorine in Nitrogen	GMT10201				TH				
10 ppm Chlorine in Nitrogen	GMT10202				TH				
50 ppm Chlorine in Nitrogen	GMT10534				TH				
Ethane									
1.5 % Ethane in Air	GMT10032	TK	TC	TB	TH	TG		TD	6R
100 ppm Ethane in Helium	GMT10423	TK	TC	TB	TH	TG		TD	6R
1000 ppm Ethane in Helium	GMT10422	TK	TC	TB	TH	TG		TD	6R
1 % Ethane in Helium	GMT10421	TK	TC	TB	TH	TG		TD	6R
Ethylene									
8-10 ppm Ethylene in Air	GMT10354	TK	TC	TB	TH	TG		TD	6R
100 ppm Ethylene in Helium	GMT10325	TK	TC	TB	TH	TG		TD	6R
1000 ppm Ethylene in Helium	GMT10333	TK	TC	TB	TH	TG		TD	6R
8-10 ppm Ethylene in Nitrogen	GMT10322	TK	TC	TB	TH	TG		TD	6R
1000 ppm Ethylene in Nitrogen	GMT10334	TK	TC	TB	TH	TG		TD	6R
1 % Ethylene in Nitrogen	GMT10311	TK	TC	TB	TH	TG		TD	6R
Ethylene Oxide									
10 ppm Ethylene Oxide in Nitrogen	GMT10535				TH		TM		6R
Halocarbon 12									
1000 ppm Halocarbon 12 in Nitrogen	GMT10536	TK	TC	TB	TH	TG		TD	6R
Hexane									
300 ppm Hexane in Helium	GMT10537	TK		TB	TH	TG		TD	6R
15 % LEL (1800 ppm) Hexane in Air	GMT10538	TK		TB	TH	TG		TD	6R
40 % LEL (4800 ppm) Hexane in Air	GMT10539	TK		TB	TH	TG		TD	6R
Hydrogen									
200 ppm Hydrogen in Air	GMT10540	TK		TB	TH	TG		TD	6R
800 ppm Hydrogen in Air	GMT10541	TK		TB	TH	TG		TD	6R
50 % LEL (2.0%) Hydrogen in Air	GMT10033	TK		TB	TH	TG		TD	6R
100 ppm Hydrogen in Helium	GMT10330		TC	TB	TH	TG		TD	6R
100 ppm Hydrogen in Nitrogen	GMT10332	TK	TC	TB	TH	TG		TD	6R
1000 ppm Hydrogen in Nitrogen	GMT10335	TK	TC	TB	TH	TG		TD	6R
1 % Hydrogen in Nitrogen	GMT10328	TK	TC	TB	TH	TG		TD	6R

Ordering Information

When ordering, use base code plus cylinder designation suffix for the appropriate cylinder type.
 Ex: GMT10002TH is for Air Ultra Zero Certified in a MicroMAT™-58 Cylinder

Note: See Cylinder Specifications Chart on page 2 for description of cylinders.





Two Component Mixtures (continued)

Product Description	Base Code	MicroMAT™/MiniMAT™ Cylinders							
		10	14	17	58	105	116	221	6R
Hydrogen Chloride									
5 ppm Hydrogen Chloride in Nitrogen	GMT10542				TH				
10 ppm Hydrogen Chloride in Nitrogen	GMT10543				TH				
50 ppm Hydrogen Chloride in Nitrogen	GMT10544				TH				
Hydrogen Cyanide									
5 ppm Hydrogen Cyanide in Nitrogen	GMT10545				TH				
10 ppm Hydrogen Cyanide in Nitrogen	GMT10546				TH				
Hydrogen Sulfide									
25 ppm Hydrogen Sulfide in Air	GMT10222				TH		TM		6R
40 ppm Hydrogen Sulfide in Air	GMT10547				TH		TM		6R
50 ppm Hydrogen Sulfide in Air	GMT10223				TH		TM		6R
100 ppm Hydrogen Sulfide in Air	GMT10548				TH		TM		6R
10 ppm Hydrogen Sulfide in Nitrogen	GMT10207				TH		TM		6R
25 ppm Hydrogen Sulfide in Nitrogen	GMT10209				TH		TM		6R
40 ppm Hydrogen Sulfide in Nitrogen	GMT10583				TH		TM		6R
100 ppm Hydrogen Sulfide in Nitrogen	GMT10211				TH		TM		6R
Isobutane									
100 ppm Isobutane in Air	GMT10045	TK	TC		TH	TG			6R
Isobutylene									
50 ppm Isobutylene in Air	GMT10549	TK	TC	TB	TH	TG		TD	6R
100 ppm Isobutylene in Air	GMT10047	TK	TC	TB	TH	TG		TD	6R
Methane									
10 ppm Methane in Air	GMT10034	TK	TC	TB	TH	TG		TD	6R
100 ppm Methane in Air	GMT10035	TK	TC	TB	TH	TG		TD	6R
20 % LEL (1.0%) Methane in Air	GMT10038	TK	TC	TB	TH	TG		TD	6R
30 % LEL (1.5%) Methane in Air	GMT10550	TK	TC	TB	TH	TG		TD	6R
50 % LEL (2.5%) Methane in Air	GMT10039	TK	TC	TB	TH	TG		TD	6R
100 ppm Methane in Helium	GMT10337	TK	TC		TH				
1000 ppm Methane in Helium	GMT10336	TK	TC		TH				
1 % Methane in Helium	GMT10312	TK	TC		TH				
10 % Methane in Helium	GMT10320	TK	TC						
100 ppm Methane in Nitrogen	GMT10341	TK	TC		TH				
1000 ppm Methane in Nitrogen	GMT10339	TK	TC		TH				
1 % Methane in Nitrogen	GMT10338	TK	TC	TB	TH	TG		TD	6R
5 % Methane in Nitrogen	GMT10551	TK	TC	TB	TH	TG		TD	6R
10 % Methane in Nitrogen	GMT10321	TK	TC						
Nitrogen									
100 ppm Nitrogen in Helium	GMT10343	TK	TC		TH				
1000 ppm Nitrogen in Helium	GMT10340	TK	TC		TH				
1 % Nitrogen in Helium	GMT10315	TK	TC		TH				
Nitric Oxide									
10 ppm Nitric Oxide in Nitrogen	GMT10212				TH		TM		6R
25 ppm Nitric Oxide in Nitrogen	GMT10214				TH		TM		6R
50 ppm Nitric Oxide in Nitrogen	GMT10215				TH		TM		6R

Ordering Information

When ordering, use base code plus cylinder designation suffix for the appropriate cylinder type.
Ex: GMT10002TH is for Air Ultra Zero Certified in a MicroMAT™-58 Cylinder

Note: See Cylinder Specifications Chart on page 2 for description of cylinders.

Don't see a product or cylinder size you need, call us to quote!



Complete Gas Listing

24 Two Component Mixtures (continued)

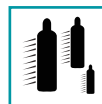
Product Description	Base Code	MicroMAT™/MiniMAT™ Cylinders							
		10	14	17	58	105	116	221	6R
Nitrogen Dioxide									
5 ppm Nitrogen Dioxide in Air	GMT10552				TH				6R
10 ppm Nitrogen Dioxide in Air	GMT10554				TH		TM		6R
20 ppm Nitrogen Dioxide in Air	GMT10556				TH		TM		6R
5 ppm Nitrogen Dioxide in Nitrogen	GMT10553				TH		TM		6R
10 ppm Nitrogen Dioxide in Nitrogen	GMT10555				TH		TM		6R
20 ppm Nitrogen Dioxide in Nitrogen	GMT10557				TH		TM		6R
Nitrous Oxide									
100 ppm Nitrous Oxide in Helium	GMT10345	TK	TC		TH				
1 % Nitrous Oxide in Helium	GMT10316	TK	TC		TH				
10 % Nitrous Oxide in Helium	GMT10323	TK	TC		TH				
0.1 ppm Nitrous Oxide in Nitrogen	GMT10302		TC		TH				
1 ppm Nitrous Oxide in Nitrogen	GMT10349	TK	TC		TH				
100 ppm Nitrous Oxide in Nitrogen	GMT10346	TK	TC		TH				
1000 ppm Nitrous Oxide in Nitrogen	GMT10342	TK	TC		TH				
Oxygen									
100 ppm Oxygen in Helium	GMT10353	TK	TC	TB	TH	TG		TD	6R
1 % Oxygen in Helium	GMT10317	TK	TC	TB	TH	TG		TD	6R
10 % Oxygen in Helium	GMT10324	TK	TC	TB	TH	TG		TD	6R
100 ppm Oxygen in Nitrogen	GMT10347	TK	TC	TB	TH	TG		TD	6R
1 % Oxygen in Nitrogen	GMT10318	TK	TC	TB	TH	TG		TD	6R
2 % Oxygen in Nitrogen	GMT10356	TK	TC	TB	TH	TG		TD	6R
6 % Oxygen in Nitrogen	GMT10357	TK	TC	TB	TH	TG		TD	6R
10 % Oxygen in Nitrogen	GMT10326	TK	TC	TB	TH	TG		TD	6R
19 % Oxygen in Nitrogen	GMT10042	TK	TC	TB	TH	TG		TD	6R
20.9 % Oxygen in Nitrogen	GMT10584	TK	TC	TB	TH	TG		TD	6R
Pentane									
25 % LEL (0.35%) Pentane in Air	GMT10558	TK	TC	TB	TH	TG		TD	6R
50 % LEL (0.70%) Pentane in Air	GMT10559	TK	TC	TB	TH	TG		TD	6R
Propane									
10 ppm Propane in Air	GMT10560	TK	TC	TB	TH	TG		TD	6R
30 % LEL (0.63%) Propane in Air	GMT10561	TK	TC	TB	TH	TG		TD	6R
50 % LEL (1.05%) Propane in Air	GMT10562	TK	TC	TB	TH	TG		TD	6R
Sulfur Dioxide									
25 ppm Sulfur Dioxide in Air	GMT10228				TH		TM		6R
50 ppm Sulfur Dioxide in Air	GMT10229				TH		TM		6R
10 ppm Sulfur Dioxide in Nitrogen	GMT10563				TH		TM		6R
25 ppm Sulfur Dioxide in Nitrogen	GMT10564				TH		TM		6R
50 ppm Sulfur Dioxide in Nitrogen	GMT10565				TH		TM		6R
100 ppm Sulfur Dioxide in Nitrogen	GMT10566				TH		TM		6R
1,1,1-Trichloroethane									
10 ppm 1,1,1-Trichloroethane in Nitrogen	GMT10301		TC		TH				6R
Trichloroethylene									
10 ppm Trichloroethylene in Nitrogen	GMT10359		TC		TH				6R

Ordering Information

When ordering, use base code plus cylinder designation suffix for the appropriate cylinder type.
 Ex: GMT10002TH is for Air Ultra Zero Certified in a MicroMAT™-58 Cylinder

Note: See Cylinder Specifications Chart on page 2 for description of cylinders.

Don't see a product or cylinder size you need, call us to quote!



Two Component Mixtures (continued)

Product Description	Base Code	MicroMAT™/MiniMAT™ Cylinders							
		10	14	17	58	105	116	221	6R
Vinyl Chloride									
1 ppm Vinyl Chloride in Nitrogen	GMT10363				TH				6R
10 ppm Vinyl Chloride in Nitrogen	GMT10362				TH				6R
50 ppm Vinyl Chloride in Nitrogen	GMT10364		TC		TH				6R
100 ppm Vinyl Chloride in Nitrogen	GMT10360		TC		TH				6R
1000 ppm Vinyl Chloride in Nitrogen	GMT10361		TC		TH				6R

Multicomponent Mixtures

Product Description	Base Code	MicroMAT™/MiniMAT™ Cylinders							
		10	14	17	58	105	116	221	6R
BTEX Mixtures in Nitrogen									
Benzene, Ethyl Benzene, Toluene, Xylene									
1 ppm BTEX Mixture	GMT10231				TH				6R
10 ppm BTEX Mixture	GMT10417				TH				6R
100 ppb BTEX Mixture	GMT10232				TH				6R
C₂ to C₄ Alkyne in Nitrogen									
Acetylene, 1-Butyne, 2-Butyne, Propyne each at 15 ppm	GMT10412		TC		TH				6R
Carbon Monoxide, Methane in Air									
50 ppm Carbon Monoxide 50 % LEL (2.5%) Methane	GMT10567	TK		TB	TH	TG		TD	6R
250 ppm Carbon Monoxide 50 % LEL (2.5%) Methane	GMT10568	TK		TB	TH	TG		TD	6R
Carbon Monoxide, Pentane in Air									
50 ppm Carbon Monoxide 30 % LEL (0.42%) Pentane	GMT10569	TK		TB	TH	TG		TD	6R
Carbon Monoxide, Propane in Air									
50 ppm Carbon Monoxide 50 % LEL (1%) Propane	GMT10570	TK		TB	TH	TG		TD	6R
Methane, Oxygen in Air									
50 ppm Methane 17 % Oxygen	GMT10581	TK	TC	TB	TH	TG		TD	6R
Pentane, Oxygen in Nitrogen									
25 % LEL (0.35%) Pentane 19 % Oxygen	GMT10582	TK	TC	TB	TH	TG		TD	6R
Carbon Dioxide, Oxygen in Nitrogen									
1 % Carbon Dioxide 1 % Oxygen	GMT10429	TK	TC	TB	TH	TG		TD	6R
1 % Carbon Dioxide 2 % Oxygen	GMT10420	TK	TC	TB	TH	TG		TD	6R
2 % Carbon Dioxide 24 % Oxygen	GMT10350	TK	TC	TB	TH	TG		TD	6R
3 % Carbon Dioxide 17 % Oxygen	GMT10352	TK	TC	TB	TH	TG		TD	6R

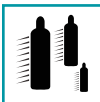
Ordering Information

When ordering, use base code plus cylinder designation suffix for the appropriate cylinder type.

Ex: GMT10002TH is for Air Ultra Zero Certified in a MicroMAT™-58 Cylinder

Note: See Cylinder Specifications Chart on page 2 for description of cylinders.





Complete Gas Listing

26 Multicomponent Mixtures (continued)

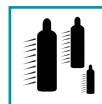
Product Description	Base Code	MicroMAT™/MiniMAT™ Cylinders							
		10	14	17	58	105	116	221	6R
Carbon Monoxide, Methane, Oxygen in Nitrogen 100 ppm Carbon Monoxide 50 % LEL (2.5%) Methane 19 % Oxygen	GMT10571	TK		TB	TH	TG		TD	6R
Carbon Monoxide, Pentane, Oxygen in Nitrogen 50 ppm Carbon Monoxide 25 % LEL (0.35%) Pentane 20.9 % Oxygen	GMT10572	TK		TB	TH	TG		TD	6R
100 ppm Carbon Monoxide 25 % LEL (.35%) Pentane 19 % Oxygen	GMT10573	TK		TB	TH	TG		TD	6R
Carbon Monoxide, Methane, Hydrogen Sulfide in Air 50 ppm Carbon Monoxide 50 % LEL (2.5%) Methane 25 ppm Hydrogen Sulfide	GMT10574				TH		TM		6R
Carbon Monoxide, Pentane, Hydrogen Sulfide in Air 50 ppm Carbon Monoxide 30 % LEL (0.42%) Pentane 25 ppm Hydrogen Sulfide	GMT10575				TH		TM		6R
Carbon Monoxide, Methane, Hydrogen Sulfide, Oxygen in Nitrogen 50 ppm Carbon Monoxide 25 % LEL (1.25%) Methane 25 ppm Hydrogen Sulfide 18 % Oxygen	GMT10576				TH		TM		6R
100 ppm Carbon Monoxide 50 % LEL (2.5%) Methane 25 ppm Hydrogen Sulfide 20.8 % Oxygen	GMT10577				TH		TM		6R
250 ppm Carbon Monoxide 50 % LEL (2.5%) Methane 40 ppm Hydrogen Sulfide 21 % Oxygen	GMT10578				TH		TM		6R
300 ppm Carbon Monoxide 25 % LEL (1.25%) Methane 10 ppm Hydrogen Sulfide 15 % Oxygen	GMT10579				TH		TM		6R
Carbon Monoxide, Pentane, Hydrogen Sulfide, Oxygen in Nitrogen 100 ppm Carbon Monoxide 25 % LEL (0.35%) Pentane 25 ppm Hydrogen Sulfide 19 % Oxygen	GMT10580				TH		TM		6R

Ordering Information

When ordering, use base code plus cylinder designation suffix for the appropriate cylinder type.
Ex: GMT10002TH is for Air Ultra Zero Certified in a MicroMAT™-58 Cylinder

Note: See Cylinder Specifications Chart on page 2 for description of cylinders.

Don't see a product or cylinder size you need, call us to quote!



Multicomponent Mixtures (continued)

Product Description	Base Code	MicroMAT™/MiniMAT™ Cylinders							
		10	14	17	58	105	116	221	6R
Methane, Ethane, Ethylene, Acetylene, Propane, Propylene, Propyne, n-Butane in Nitrogen each at 15 ppm	GMT10415		TC		TH				6R
n-Butane, Isobutane, cis-2-Butene, trans-2-Butene, 1-Butene, Isobutylene, 1,3-Butadiene, Ethyl Acetylene, in Nitrogen each at 15 ppm	GMT10416		TC		TH				6R
2-Olefin Mixtures in Nitrogen cis-2-Butene, trans-2-Butene, cis-2-Pentene trans-2-Pentene, cis-2-Hexene, trans-2-Hexene each at 15 ppm	GMT10351		TC		TH				6R
C ₂ to C ₆ Olefin Mixtures in Helium Ethylene, Propylene, 1-Butene, 1-Pentene, 1-Hexene, each at 100 ppm	GMT10414		TC		TH				6R
Ethylene, Propylene, 1-Butene, 1-Pentene, 1-Hexene, each at 1000 ppm	GMT10358		TC		TH				6R
C ₂ to C ₆ Olefin Mixtures in Nitrogen Ethylene, Propylene, 1-Butene, 1-Pentene, 1-Hexene, each at 100 ppm	GMT10413		TC		TH				6R
Ethylene, Propylene, 1-Butene, 1-Pentene, 1-Hexene, each at 1000 ppm	GMT10450		TC		TH				6R
C ₁ to C ₆ n-Paraffins Mixtures in Helium Methane, Ethane, Propane, Butane, Pentane, Hexane each at 100 ppm	GMT10409		TC		TH				6R
Methane, Ethane, Propane, Butane, Pentane, Hexane each at 1000 ppm	GMT10411		TC		TH				6R
C ₁ to C ₆ n-Paraffins Mixtures in Nitrogen Methane, Ethane, Propane, Butane, Pentane, Hexane each at 15 ppm	GMT10408	TK	TC	TB	TH	TG		TD	6R
Methane, Ethane, Propane, Butane, Pentane, Hexane each at 100 ppm	GMT10410	TK	TC	TB	TH	TG		TD	6R
Methane, Ethane, Propane, Butane, Pentane, Hexane each at 1000 ppm	GMT10355	TK	TC	TB	TH	TG		TD	6R
Branched Paraffins Mixtures in Nitrogen Isobutane, 2-Methylbutane, 2,2-Dimethylpropane, 2-Methylpentane 3-Methylpentane, 2,2-Dimethylbutane each at 15 ppm	GMT10407		TC		TH				6R
Carbon Monoxide, Carbon Dioxide in Nitrogen 25 ppm Carbon Monoxide 1000 ppm Carbon Dioxide	GMT10053		TC		TH				6R

Ordering Information

When ordering, use base code plus cylinder designation suffix for the appropriate cylinder type.

Ex: GMT10002TH is for Air Ultra Zero Certified in a MicroMAT™-58 Cylinder

Note: See Cylinder Specifications Chart on page 2 for description of cylinders.





Complete Gas Listing

28 Multicomponent Mixtures (continued)

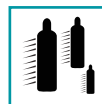
Product Description	Base Code	MicroMAT™/MiniMAT™ Cylinders							
		10	14	17	58	105	116	221	6R
Carbon Monoxide, Carbon Dioxide, Methane, Ethane, Ethylene, Acetylene in Nitrogen, each at 1 %	GMT10402	TK	TC	TB	TH	TG		TD	6R
Carbon Monoxide, Carbon Dioxide, Methane, Hydrogen, Oxygen in Nitrogen, each at 1 %	GMT10403	TK	TC	TB	TH	TG		TD	6R
Carbon Dioxide, Carbon Monoxide, Nitrogen, Oxygen, Methane, Hydrogen in Helium 5 % Carbon Dioxide 5 % Carbon Monoxide 5 % Nitrogen 5 % Oxygen 4 % Methane 4 % Hydrogen	GMT10404		TC	TB					
Carbon Dioxide, Carbon Monoxide, Oxygen in Nitrogen 15 % Carbon Dioxide 7 % Carbon Monoxide 5 % Oxygen	GMT10348	TK	TC	TB	TH	TG		TD	6R
Carbon Dioxide, Carbon Monoxide, Oxygen, Methane in Nitrogen 15 % Carbon Dioxide 7 % Carbon Monoxide 7 % Oxygen 4.5 % Methane	GMT10406	TK	TC	TB	TH	TG		TD	6R
Carbon Dioxide, Carbon Monoxide, Oxygen, Hydrogen in Nitrogen, each at 0.5%	GMT10401	TK	TC	TB	TH	TG		TD	6R
Carbon Dioxide, Carbon Monoxide, Oxygen, Hydrogen in Nitrogen 0.5 % Carbon Dioxide 0.5 % Carbon Monoxide 0.5 % Oxygen 5 % Hydrogen	GMT10428	TK	TC	TB	TH	TG		TD	6R

Ordering Information

When ordering, use base code plus cylinder designation suffix for the appropriate cylinder type.
Ex: GMT10002TH is for Air Ultra Zero Certified in a MicroMAT™-58 Cylinder

Note: See Cylinder Specifications Chart on page 2 for description of cylinders.

Don't see a product or cylinder size you need, call us to quote!



Model SYR – MicroMATE™ Syringe Adaptors



Description/Applications

Syringe adaptor used with MicroMAT™-14 cylinders. For use in the calibration of gas detection instrumentation. This adaptor allows for calibration gas flow from MicroMAT™ cylinders to the septum inlet of a gas chromatograph.

Design Features

- Pressure Rating MicroMAT™-14: 240 psig
- Interface: 1/8" NPT

Ordering Information

Model Number	Description
SYR-MM14	Syringe Adaptor for use with MicroMAT™-14

Model VLV-MM17 – MicroMATE™-17 Valve



Description/Application

This valve is a cost effective solution for use with the MicroMAT™-17 cylinder when a regulator isn't needed.

Design Features

- Maximum Inlet Pressure: 300 psig
- Cylinder Outlet
 Connection: CGA 600
- Outlet Port: 3/16" hose barb

Materials of Construction

Body:	Brass
Outlet:	Brass
Orifice:	Brass
Gasket:	Cork

Ordering Information

Model Number	Description
VLV-MM17	MicroMAT™-17 On/Off Valve



Models 3344 and 3345 – MicroMATE™ Portable Cylinder Regulators
Brass Preset Flow Rate Regulators



Description/Application

Preset flow regulators for use with MicroMAT™-58 and MicroMAT™-105 cylinders. For use with portable and/or laboratory instrumentation that requires calibration.

Design Features

- Brass bodies
- Brass pistons
- 3/16" Hose barb outlet
- Push button on/off mechanism
- 0.3 SLPM standard preset flow rate; also available: 0.5, 1.0, 1.5, 2.5 SLPM
- 30 psig delivery pressure
- Cylinder pressure gauge:

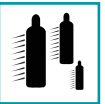
3344: 0 - 500 psig
 3345: 0 - 1200 psig

Materials of Construction

Body: Nickel plated brass
 Piston: Brass
 Seat: Teflon
 Seals: Viton
 Gauge: Nickel plated brass

Ordering Information

Model Number	Description
3344-C10	3344 Regulator with C10 Fitting and 0.3 SLPM Flow Rate
3344-C10C	3344 Regulator with C10 Fitting and 0.5 SLPM Flow Rate
3344-C10E	3344 Regulator with C10 Fitting and 1.0 SLPM Flow Rate
3344-C10F	3344 Regulator with C10 Fitting and 1.5 SLPM Flow Rate
3344-C10G	3344 Regulator with C10 Fitting and 2.5 SLPM Flow Rate
3345-C10	3345 Regulator with C10 Fitting and 0.3 SLPM Flow Rate
3345-C10C	3345 Regulator with C10 Fitting and 0.5 SLPM Flow Rate
3345-C10E	3345 Regulator with C10 Fitting and 1.0 SLPM Flow Rate
3345-C10F	3345 Regulator with C10 Fitting and 1.5 SLPM Flow Rate
3345-C10G	3345 Regulator with C10 Fitting and 2.5 SLPM Flow Rate



Model 3347 – MicroMATE™ Portable Cylinder Regulators Brass Variable Flow Rate Regulators



Description/Application

Variable flow regulators for use with MicroMAT™-14, MicroMAT™-58, MicroMAT™-105, and MicroMAT™-221 cylinders. For use with portable and/or laboratory instrumentation that requires calibration.

Design Features

- Brass bodies
- Stainless steel pistons
- Hose barb outlet
- Selectable flow rates from 0-3 SLPM: 0.3, 0.5, 0.7, 0.9, 1.2, 1.5, 2.0, 2.5, 3.0
- 50 psig delivery pressure

Materials of Construction

Body:	Nickel plated brass
Piston:	316 stainless steel
Seat:	Teflon
Seals:	Viton
Gauge:	Nickel plated brass
Bonnet (Wetted)	Aluminum

Ordering Information

Model Number	Description
3347-160	3347 Regulator with CGA 160, Variable Flow
3347-C10	3347 Regulator with C10 fitting, Variable Flow
3347-165	3347 Regulator with CGA 165, Variable Flow
3347-600	3347 Regulator with CGA 600, Variable Flow

Model 3359 – MicroMATE™ Portable Cylinder Regulators Stainless Steel Preset Flow Rate Regulators



Description/Applications

Preset flow rate regulators for use with MicroMAT™-58 cylinders. For use in the calibration of gas detection instrumentation.

Design Features

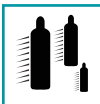
- Stainless steel bodies
- Stainless steel pistons
- Hose barb outlet - 3/16"
- 0.3 SLPM standard preset flow rate; also available: 0.5, 1.0, 1.5, 2.5 SLPM
- 30 psig delivery pressure

Materials of Construction

Body:	Stainless steel
Piston:	316 stainless steel
Seat:	Teflon
Seals:	Viton
Gauge:	316 stainless steel

Ordering Information

Model Number	Description
3359-C10	3359 Regulator with C10 Fitting and 0.3 SLPM Flow Rate
3359-C10C	3359 Regulator with C10 Fitting and 0.5 SLPM Flow Rate
3359-C10E	3359 Regulator with C10 Fitting and 1.0 SLPM Flow Rate
3359-C10F	3359 Regulator with C10 Fitting and 1.5 SLPM Flow Rate
3359-C10G	3359 Regulator with C10 Fitting and 2.5 SLPM Flow Rate
3359HP-C10	3359 Regulator with C10 Fitting and 1200 psig Gauge



MATHESON Portables™ MicroMATE™ Equipment

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Model CKIT-SAFE – MicroCALKIT™-Safety



Description/Applications

This portable calibration kit is designed to accept two MicroMAT™-58's or -105's or one each of the 58 and 105 liter cylinders. It also comes with 3 feet of tygon tubing and sensor head assembly. It is wall mountable with a split front door. The MicroCALKIT™-Safety was primarily designed to support users who calibrate gas detection instrumentation for industrial hygiene and safety.

Design Features

- Can carry two MicroMAT™-58, two MicroMAT™-105 or one each of the 58 and 105 liter cylinders
- Molded handle with finger grips for comfort
- Wall-mountable
- Split front door allows easy access for calibration operation

Materials of Construction

- High-density polyethylene

Ordering Information

Model Number	Description
CKIT-SAFE	MicroCALKIT™-Safety for 2 MicroMAT™ Cylinders

Model CKIT-GENL – MicroCALKIT™-General Purpose



Description/Applications

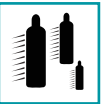
This calibration kit comes with 3 feet of tygon tubing and a sensor head assembly. MATHESON will assemble this kit to meet your specific calibration kit needs.

Design Features

- Sturdy, but lightweight plastic case with foam inserts
- Standard case will hold any combination of MicroMAT™-58 and MicroMAT™-105 liter cylinders.

Ordering Information

Model Number	Description
CKIT-GENL	MicroCALKIT™-General Purpose



Model CKIT-TUFF – MicroCALKIT™-Heavy Duty



Description/Applications

Portable calibration kit for extreme conditions where durability is paramount.

Design Features

- Rugged, water tight case
- Strong, structural resin
- Neoprene O-ring seal
- Die-cut foam insert can be customized for cylinders and equipment

Ordering Information

Model Number	Description
CKIT-TUFF	MicroCALKIT™-Heavy Duty

Model CAS-0105-XX – MicroPELKIT™



Description/Applications

Portable calibration kit for extreme conditions where durability is paramount.

Design Features

- Reusable kit - just re-order cylinders
- Lightweight
- Durable with foam inserts to hold cylinders and regulators

Ordering Information

Model Number	Description
CAS-0105-XX	Case with Foam Insert

Options

Model Number	Description
SEN-0021-PD	Sensor Cup
TBG-0214-QF	Flexible Tubing, 36" long
WRC-0005-XX	Adjustable Wrench
RFM-0030-XX	Regulator with Orifice, Preset



Model KIT-0529-XX



Description/Applications

This Portable PELgas™ kit holds two MiniMAT™ 6R cylinders with regulator flowmeter combination, calibration cup, 3 feet tygon tubing, small adjustable 6" wrench, CGA-180 teflon washers and Pelican case with precut foam insert.

Design Features

- Reusable kit – just re-order cylinders
- Lightweight
- Durable with foam inserts to hold cylinders

Ordering Information

Model Number	Description
KIT-0529-XX	PELgas™ Kit MiniMAT™ 6R
RFM-0029-XX	Preset regulator flowmeter combination
SEN-0021-PD	Calibration cup
TBG-0214-QF	3 feet tygon tubing
WRC-0013-XX	Small adjustable 6" wrench
WAS-0039-PB	CGA-180 teflon washers
CAS-0038-XX	Pelican case with precut foam inserts
HOL-0026-XX	MiniMAT™ 6R stand

Model KIT-0530-XX



Description/Applications

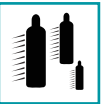
This Portable PELgas™ kit holds two MiniMAT™ 6R cylinders with preset regulator, restricting orifice and 1/4" hose barb, calibration cup, 3 feet tygon tubing, small adjustable 6" wrench, CGA-180 teflon washers and Pelican case with precut foam insert.

Design Features

- Reusable kit – just re-order cylinders
- Lightweight
- Durable with foam inserts to hold cylinders

Ordering Information

Model Number	Description
KIT-0530-XX	PELgas™ Kit MiniMAT™ 6R
RFM-0030-XX	Preset regulator flowmeter combination with restricting orifice & 1/4" hose barb
SEN-0021-PD	Calibration cup
TBG-0214-QF	3 feet tygon tubing
WRC-0013-XX	Small adjustable 6" wrench
WAS-0039-PB	CGA-180 teflon washers
CAS-0038-XX	Pelican case with precut foam inserts
HOL-0026-XX	MiniMAT™ 6R stand



Model BAG – Tedlar Sample Bags

Description/Applications

The MicroMATE™ Tedlar Sample Bags are designed to collect air samples containing common solvents, hydrocarbons, chlorinated solvents and many other types of chemicals. These bags are used in air monitoring applications such as air sampling, TWA, gas blending.

Design Features

- Can be re-used
- Fatigue resistant
- Large sample port for flushing

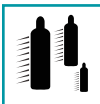
Ordering Information

Model Number	Description
BAG-MM1-BA	1 liter Tedlar Bag, Nickel Plated Valve
BAG-MM1-PP	1 liter Tedlar Bag, Polypropylene Valve
BAG-MM5-BA	5 liter Tedlar Bag, Nickel Plated Valve
BAG-MM5-PP	5 liter Tedlar Bag, Polypropylene Valve
BAG-MM10-BA	10 liter Tedlar Bag, Nickel Plated Valve
BAG-MM10-PP	10 liter Tedlar Bag, Polypropylene Valve
BAG-MM25-BA	25 liter Tedlar Bag, Nickel Plated Valve
BAG-MM25-PP	25 liter Tedlar Bag, Polypropylene Valve
BAG-MM40-BA	40 liter Tedlar Bag, Nickel Plated Valve
BAG-MM40-PP	40 liter Tedlar Bag, Polypropylene Valve

General Accessories

Ordering Information

Model Number	Description
SEP-MM5	Pack of 12 Septums, MicroMAT™-5
SEP-MM14	Pack of 25 Septums, MicroMAT™-14
TBG-0077-QF	Tygon Tubing
SEN-0021-PD	Sensor Head Assembly



Models RFM-0029-XX and RFM-0030-XX
MicroMATE™ Transportable Cylinder Regulators
Aluminum Regulator



RFM-0029-XX (with flowmeter)

Description/Applications

Aluminum regulators for use with MiniMAT™ cylinders. Air monitoring for PEL and LEL levels.

Design Features

- Aluminum bodies
- Hose barb outlet
- 30 psig delivery pressure
- Available with 0-1.5 SLPM adjustable flow rate and flowmeter (RFM-0029-XX), 0.5 SLPM preset flow rate (RFM-0030-XX)

Materials of Construction

Body: Anodized aluminum
 Diaphragm: 316 stainless steel
 Seat: Teflon PFA
 Seals: Teflon
 Gauge: 316 stainless steel

Ordering Information

Model Number	Description	Cylinder Outlet Connection	Cylinder Pressure Gauge
RFM-0029-XX	RFM Regulator with flowmeter	CGA 180	0-3000 psig
RFM-0030-XX	RFM Regulator with 0.5 SLPM preset flow rate	CGA 180	0-3000 psig

Model 3590A Series
Low Dead Volume Regulator



Description/Applications

A high purity stainless steel regulator with a minimal (7 cubic centimeters) internal volume to minimize contamination. The Model 3590A is recommended for use with MiniMAT™ cylinders, specific for air toxics monitoring applications.

Design Features/Components

- All metal components either 316 stainless steel or silver
- Metal to metal seals eliminate diffusion of gases
- Low dead volume minimizes contamination and adsorption
- 1/8" compression tube fitting on outlet
- Optional helium leak rate certification available.

Materials of Construction

Body: 316 stainless steel
 Bonnet: Nickel plated brass
 Diaphragm: 316 stainless steel
 Seat: Kel-F
 Seals: Silver

Specifications

Maximum Inlet Pressure: 3000 psig (20,700 kPa)
 Maximum Flow Rate: 21 SCFH (10 SLPM)
 (At 2000 psig, N₂)
 Flow Capacity (Cv): 0.04
 Operating Temperature: -40°F to 200°F (-40°C to 93°C)
 Porting: 1/4" NPT Female
 Porting Configuration: 1 High, 1 Low
 Shipping Weight: 4 lbs

Ordering Information

Model Number	Description	Cylinder Outlet Connection
3590A-CGA	Low Dead Volume Regulator	CGA 180

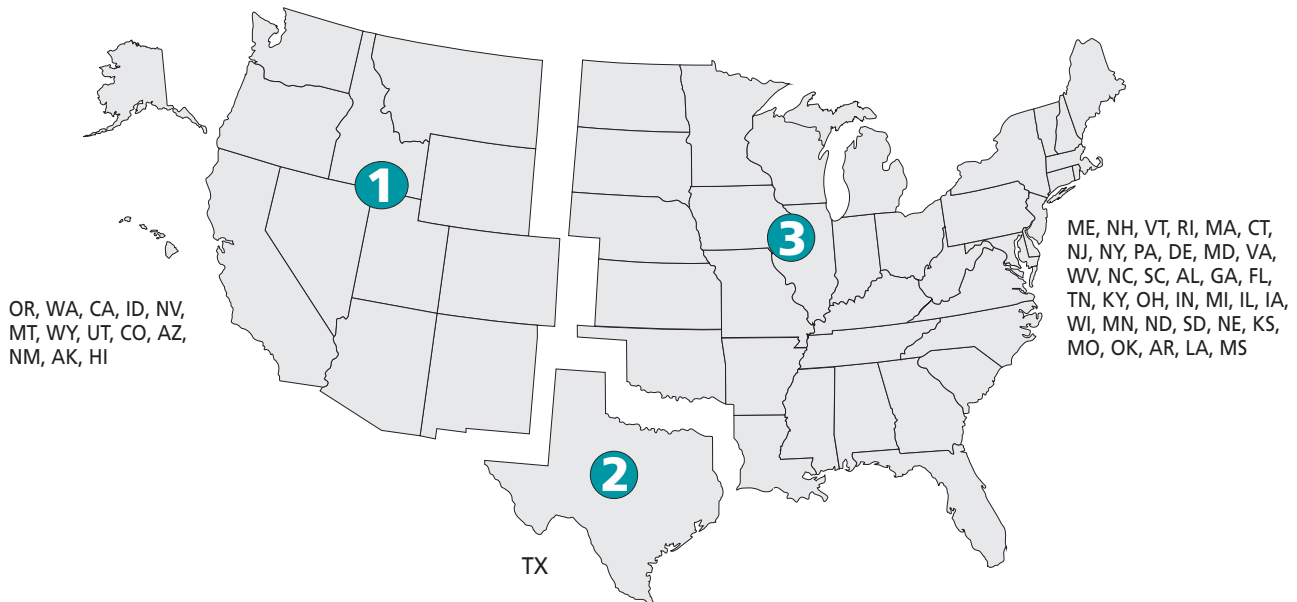


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MATERIAL SAFETY DATA SHEETS (MSDS)

Data Sheets for gases can be downloaded from the MATHESON website at

www.mathesongas.com/msds

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