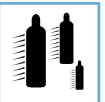


# Nippon Sanso Matheson Portables™

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## Introduction



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

Nippon Sanso 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 Nippon Sanso Matheson and we will find it for you!**

### Nippon Sanso Matheson Portables™ Gas Specifications

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

Minor Component Reactivity Ratings:

HR = Highly Reactive, includes Cl<sub>2</sub>, HCl, HCN, NO<sub>2</sub> and H<sub>2</sub>S/CO/hydrocarbons/air

R = Reactive, includes NO, SO<sub>2</sub>, H<sub>2</sub>S in N<sub>2</sub> or Air, dienes and alkynes

NR = Non Reactive, includes CO, CO<sub>2</sub>, N<sub>2</sub>O, O<sub>2</sub>, 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.



## 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™-221  
 Gas Volume: 221 Liters  
 Pressure Rating: 260 psi  
 Outlet Connection: CGA 165  
 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 6R Disposable 6A



**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: Disposable



**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: 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



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 Nippon Sanso 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 Nippon Sanso Matheson for more information!***



### Pure Gases

Product Description	Base Code	MicroMAT™/MiniMAT™ Cylinders						
		10	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		TB					6R
Methane, CP	GMT10015		TB					6R
Nitrogen, Zero Gas	GMT10022	TK	TB		TG		TD	6R

### NEW Portable Cylinder Size:

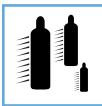
**116 liter aluminum cylinder for reactive gas blends;  
 Designed for high volume users of hydrogen sulfide four gas mixtures.  
 Please call Nippon Sanso Matheson for more information.**

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

#### 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.



# Nippon Sanso Matheson Portables™ Calibration Products for Safety

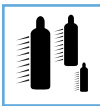
## Two Component Mixtures

Product Description	Base Code	MicroMAT™/MiniMAT™ Cylinders						
		10	17	58	105	116	221	6R
<b>Ammonia</b>								
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
<b>Carbon Dioxide</b>								
100 ppm Carbon Dioxide in Air	GMT10521	TK	TB	TH	TG		TD	6R
1000 ppm Carbon Dioxide in Air	GMT10025	TK	TB	TH	TG		TD	6R
5 % Carbon Dioxide in Air	GMT10522	TK	TB	TH	TG		TD	6R
1000 ppm Carbon Dioxide in Nitrogen	GMT10313	TK	TB	TH	TG		TD	6R
2.5 % Carbon Dioxide in Nitrogen	GMT10523	TK	TB	TH	TG		TD	6R
5 % Carbon Dioxide in Nitrogen	GMT10524	TK	TB	TH	TG		TD	6R
10 % Carbon Dioxide in Nitrogen	GMT10525	TK	TB	TH	TG		TD	6R
<b>Carbon Monoxide</b>								
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
<b>Chlorine</b>								
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				
<b>Ethylene Oxide</b>								
10 ppm Ethylene Oxide in Nitrogen	GMT10535			TH		TM		6R
<b>Halocarbon 12</b>								
1000 ppm Halocarbon 12 in Nitrogen	GMT10536	TK	TB	TH	TG		TD	6R
<b>Hexane</b>								
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
<b>Hydrogen</b>								
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
<b>Hydrogen Chloride</b>								
5 ppm Hydrogen Chloride in Nitrogen	GMT10542			TH				
10 ppm Hydrogen Chloride in Nitrogen	GMT10543			TH				
50 ppm Hydrogen Chloride in Nitrogen	GMT10544			TH				



**Two Component Mixtures** *(continued)*

Product Description	Base Code	MicroMATTM/MiniMATTM Cylinders						
		10	17	58	105	116	221	6R
<b>Hydrogen Cyanide</b>								
5 ppm Hydrogen Cyanide in Nitrogen	GMT10545			TH				
10 ppm Hydrogen Cyanide in Nitrogen	GMT10546			TH				
<b>Hydrogen Sulfide</b>								
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
<b>Isobutylene</b>								
50 ppm Isobutylene in Air	GMT10549	TK	TB	TH	TG		TD	6R
100 ppm Isobutylene in Air	GMT10047	TK	TB	TH	TG		TD	6R
<b>Methane</b>								
10 ppm Methane in Air	GMT10034	TK	TB	TH	TG		TD	6R
100 ppm Methane in Air	GMT10035	TK	TB	TH	TG		TD	6R
20 % LEL (1.0%) Methane in Air	GMT10038	TK	TB	TH	TG		TD	6R
30 % LEL (1.5%) Methane in Air	GMT10550	TK	TB	TH	TG		TD	6R
50 % LEL (2.5%) Methane in Air	GMT10039	TK	TB	TH	TG		TD	6R
1% Methane in Nitrogen	GMT10338	TK	TB	TH	TG		TD	6R
5 % Methane in Nitrogen	GMT10551	TK	TB	TH	TG		TD	6R
<b>Nitric Oxide</b>								
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
<b>Nitrogen Dioxide</b>								
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
<b>Oxygen</b>								
20.9 % Oxygen in Nitrogen	GMT10584	TK	TB	TH	TG		TD	6R
<b>Pentane</b>								
25 % LEL (0.35%) Pentane in Air	GMT10558	TK	TB	TH	TG		TD	6R
50 % LEL (0.70%) Pentane in Air	GMT10559	TK	TB	TH	TG		TD	6R
<b>Propane</b>								
10 ppm Propane in Air	GMT10560	TK	TB	TH	TG		TD	6R
30 % LEL (0.63%) Propane in Air	GMT10561	TK	TB	TH	TG		TD	6R
50 % LEL (1.05%) Propane in Air	GMT10562	TK	TB	TH	TG		TD	6R



**Calibration Products for Safety**

**Two Component Mixtures (continued)**

Product Description	Base Code	MicroMAT™/MiniMAT™ Cylinders						
		10	17	58	105	116	221	6R
<b>Sulfur Dioxide</b>								
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

**WARNING:** This product can expose you to chemicals including Carbon Monoxide, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

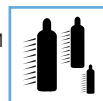
**WARNING:** This product can expose you to chemicals including Ethylene Oxide, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**WARNING:** This product can expose you to chemicals including Hydrogen cyanide (HCN) and cyanide salts (CN salts), which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**WARNING:** This product can expose you to chemicals including Sulfur Dioxide, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**Multicomponent Mixtures**

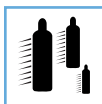
Product Description	Base Code	MicroMAT™/MiniMAT™ Cylinders						
		10	17	58	105	116	221	6R
<b>Carbon Monoxide, Methane in Air</b>								
50 ppm Carbon Monoxide 50 % LEL (2.5%) Methane	GMT10567	TK	TB	TH	TG		TD	6R
250 ppm Carbon Monoxide 50 % LEL (2.5%) Methane	GMT10568	TK	TB	TH	TG		TD	6R
<b>Carbon Monoxide,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



**Multicomponent Mixtures** (continued)

Product Description	MicroMATTM/MiniMATTM Cylinders							
	Base Code	10	17	58	105	116	221	6R
<b>Carbon Monoxide, Methane, Hydrogen Sulfide in Air</b> 50 ppm Carbon Monoxide 50 % LEL (2.5%) Methane 25 ppm Hydrogen Sulfide	<b>GMT10574</b>			<b>TH</b>		<b>TM</b>		<b>6R</b>
<b>Carbon Monoxide, Pentane, Hydrogen Sulfide in Air</b> 50 ppm Carbon Monoxide 30 % LEL (0.42%) Pentane 25 ppm Hydrogen Sulfide	<b>GMT10575</b>			<b>TH</b>		<b>TM</b>		<b>6R</b>
<b>Carbon Monoxide, Methane, Hydrogen Sulfide, Oxygen in Nitrogen</b> 50 ppm Carbon Monoxide 25 % LEL (1.25%) Methane 25 ppm Hydrogen Sulfide 18 % Oxygen	<b>GMT10576</b>			<b>TH</b>		<b>TM</b>		<b>6R</b>
100 ppm Carbon Monoxide 50 % LEL (2.5%) Methane 25 ppm Hydrogen Sulfide 20.8 % Oxygen	<b>GMT10577</b>			<b>TH</b>		<b>TM</b>		<b>6R</b>
250 ppm Carbon Monoxide 50 % LEL (2.5%) Methane 40 ppm Hydrogen Sulfide 21 % Oxygen	<b>GMT10578</b>			<b>TH</b>		<b>TM</b>		<b>6R</b>
300 ppm Carbon Monoxide 25 % LEL (1.25%) Methane 10 ppm Hydrogen Sulfide 15 % Oxygen	<b>GMT10579</b>			<b>TH</b>		<b>TM</b>		<b>6R</b>
<b>Carbon Monoxide, Pentane, Hydrogen Sulfide, Oxygen in Nitrogen</b> 100 ppm Carbon Monoxide 25 % LEL (0.35%) Pentane 25 ppm Hydrogen Sulfide 19 % Oxygen	<b>GMT10580</b>			<b>TH</b>		<b>TM</b>		<b>6R</b>
<b>Methane, Oxygen in Nitrogen</b> 50 ppm Methane 17 % Oxygen	<b>GMT10581</b>	<b>TK</b>	<b>TB</b>	<b>TH</b>	<b>TG</b>		<b>TD</b>	<b>6R</b>
<b>Pentane, Oxygen in Nitrogen</b> 25 % LEL (0.35%) Pentane 19 % Oxygen	<b>GMT10582</b>	<b>TK</b>	<b>TB</b>	<b>TH</b>	<b>TG</b>		<b>TD</b>	<b>6R</b>

**WARNING:** This product can expose you to chemicals including Carbon Monoxide, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).



## Calibration Products for Laboratory Analysis



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. Nippon Sanso 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:

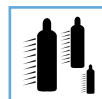
Our gas management products for GC work are offered as follows:

- Pure Gases
- Two Component Mixtures
- Multicomponent Mixtures

***If you don't see your product listed, please call Nippon Sanso Matheson for more information!***

### Pure Gases

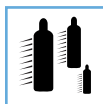
Product Description	Base Code	MicroMAT™/MiniMAT™ Cylinders						
		10	17	58	105	116	221	6R
Air Ultra Zero Certified	GMT10002			TH	TG			6R
Air Zero Gas	GMT10004	TK		TH	TG		TD	6R
Argon, Ultra High Purity	GMT10006	TK		TH	TG		TD	6R
n-Butane, CP	GMT10365		TB					
Carbon Dioxide, Bone Dry	GMT10055	TK		TH	TG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



## Calibration Products for Laboratory Analysis

### Two Component Mixtures

Product Description	Base Code	MicroMATTM/MiniMATTM Cylinders						
		10	17	58	105	116	221	6R
<b>Acetylene</b>								
1% Acetylene in Helium	GMT10303			TH				
1% Acetylene in Nitrogen	GMT10304			TH				
<b>Ammonia</b>								
50 ppm Ammonia in Nitrogen	GMT10220			TH		TM		6R
<b>Benzene</b>								
1 ppm Benzene in Air	GMT10307	TK		TH	TG			6R
10 ppm Benzene in Air	GMT10306	TK		TH	TG			6R
100 ppm Benzene in Air	GMT10305	TK		TH	TG			6R
<b>1,3-Butadiene</b>								
10 ppm 1,3-Butadiene in Nitrogen	GMT10241			TH				6R
<b>Carbon Dioxide</b>								
100 ppm Carbon Dioxide in Helium	GMT10431	TK		TH	TG			6R
1000 ppm Carbon Dioxide in Helium	GMT10331	TK		TH	TG			6R
1% Carbon Dioxide in Helium	GMT10308	TK		TH	TG			6R
10 % Carbon Dioxide in Helium	GMT10319	TK		TH	TG			6R
100 ppm Carbon Dioxide in Nitrogen	GMT10314	TK		TH	TG			6R
1000 ppm Carbon Dioxide in Nitrogen	GMT10313	TK		TH	TG			6R
1% Carbon Dioxide in Nitrogen	GMT10309	TK		TH	TG			6R
<b>Ethane</b>								
1.5 % Ethane in Air	GMT10032	TK	TB	TH	TG		TD	6R
100 ppm Ethane in Helium	GMT10423	TK	TB	TH	TG		TD	6R
1000 ppm Ethane in Helium	GMT10422	TK	TB	TH	TG		TD	6R
1% Ethane in Helium	GMT10421	TK	TB	TH	TG		TD	6R
<b>Ethylene</b>								
8-10 ppm Ethylene in Air	GMT10354	TK	TB	TH	TG		TD	6R
100 ppm Ethylene in Helium	GMT10325	TK	TB	TH	TG		TD	6R
1000 ppm Ethylene in Helium	GMT10333	TK	TB	TH	TG		TD	6R
8-10 ppm Ethylene in Nitrogen	GMT10322	TK	TB	TH	TG		TD	6R
1000 ppm Ethylene in Nitrogen	GMT10334	TK	TB	TH	TG		TD	6R
1% Ethylene in Nitrogen	GMT10311	TK	TB	TH	TG		TD	6R
<b>Hydrogen</b>								
100 ppm Hydrogen in Helium	GMT10330		TB	TH	TG		TD	6R
100 ppm Hydrogen in Nitrogen	GMT10332	TK	TB	TH	TG		TD	6R
1000 ppm Hydrogen in Nitrogen	GMT10335	TK	TB	TH	TG		TD	6R
1% Hydrogen in Nitrogen	GMT10328	TK	TB	TH	TG		TD	6R
<b>Isobutane</b>								
100 ppm Isobutane in Air	GMT10045	TK		TH	TG		6R	
<b>Methane</b>								
10 ppm Methane in Air	GMT10034	TK		TH	TG			6R
100 ppm Methane in Air	GMT10035	TK		TH	TG			6R
100 ppm Methane in Helium	GMT10337	TK		TH				
1000 ppm Methane in Helium	GMT10336	TK		TH				
1% Methane in Helium	GMT10312	TK		TH				
10 % Methane in Helium	GMT10320	TK						
100 ppm Methane in Nitrogen	GMT10341	TK		TH				
1000 ppm Methane in Nitrogen	GMT10339	TK		TH				
1% Methane in Nitrogen	GMT10338	TK		TH				
10 % Methane in Nitrogen	GMT10321	TK						



## Calibration Products for Laboratory Analysis

### Two Component Mixtures (continued)

Product Description	Base Code	MicroMAT™/MiniMAT™ Cylinders						
		10	17	58	105	116	221	6R
<b>Nitrogen</b>								
100 ppm Nitrogen in Helium	GMT10343	TK		TH				
1000 ppm Nitrogen in Helium	GMT10340	TK		TH				
1 % Nitrogen in Helium	GMT10315	TK		TH				
<b>Nitrous Oxide</b>								
100 ppm Nitrous Oxide in Helium	GMT10345	TK		TH				
1 % Nitrous Oxide in Helium	GMT10316	TK		TH				
10 % Nitrous Oxide in Helium	GMT10323	TK		TH				
0.1 ppm Nitrous Oxide in Nitrogen	GMT10302			TH				
1 ppm Nitrous Oxide in Nitrogen	GMT10349	TK		TH				
100 ppm Nitrous Oxide in Nitrogen	GMT10346	TK		TH				
1000 ppm Nitrous Oxide in Nitrogen	GMT10342	TK		TH				
<b>Oxygen</b>								
100 ppm Oxygen in Helium	GMT10353	TK	TB	TH	TG		TD	6R
1 % Oxygen in Helium	GMT10317	TK	TB	TH	TG		TD	6R
10 % Oxygen in Helium	GMT10324	TK	TB	TH	TG		TD	6R
100 ppm Oxygen in Nitrogen	GMT10347	TK	TB	TH	TG		TD	6R
1 % Oxygen in Nitrogen	GMT10318	TK	TB	TH	TG		TD	6R
2 % Oxygen in Nitrogen	GMT10356	TK	TB	TH	TG		TD	6R
6 % Oxygen in Nitrogen	GMT10357	TK	TB	TH	TG		TD	6R
10 % Oxygen in Nitrogen	GMT10326	TK	TB	TH	TG		TD	6R
19 % Oxygen in Nitrogen	GMT10042	TK	TB	TH	TG		TD	6R
<b>1,1,1-Trichloroethane</b>								
10 ppm 1,1,1-Trichloroethane in Nitrogen	GMT10301			TH				6R
<b>Trichloroethylene</b>								
10 ppm Trichloroethylene in Nitrogen	GMT10359			TH				6R
<b>Vinyl Chloride</b>								
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			TH				6R
100 ppm Vinyl Chloride in Nitrogen	GMT10360			TH				6R
1000 ppm Vinyl Chloride in Nitrogen	GMT10361			TH				6R

**WARNING:** This product can expose you to chemicals including Benzene, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

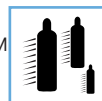
**WARNING:** This product can expose you to chemicals including 1,3-Butadiene, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**WARNING:** This product can expose you to chemicals including Nitrous Oxide, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**WARNING:** This product can expose you to chemicals including Vinyl chloride, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

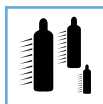
**WARNING:** This product can expose you to chemicals including Trichloroethylene, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**WARNING:** This product can expose you to chemicals including 1,1,2,2-Tetrachloroethane, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).



## Multicomponent Mixtures

Product Description	Base Code	MicroMATTM/MiniMATTM Cylinders						
		10	17	58	105	116	221	6R
<b>BTEX Mixtures in Nitrogen</b> Benzene, Ethyl Benzene, Toluene, Xylene 1 ppm BTEX Mixture	<b>GMT10231</b>			TH				6R
10 ppm BTEX Mixture	<b>GMT10417</b>			TH				6R
100 ppb BTEX Mixture	<b>GMT10232</b>			TH				6R
<b>C2 to C4 Alkyne in Nitrogen</b> Acetylene, 1-Butyne, 2-Butyne, Propyne each at 15 ppm	<b>GMT10412</b>			TH				6R
<b>Methane, Ethane, Ethylene, Acetylene, Propane, Propylene, Propyne, n-Butane in Nitrogen</b> each at 15 ppm	<b>GMT10415</b>			TH				6R
<b>n-Butane, Isobutane, cis-2-Butene, trans-2-Butene, 1-Butene, Isobutylene, 1,3-Butadiene, Ethyl Acetylene, in Nitrogen</b> each at 15 ppm	<b>GMT10416</b>			TH				6R
<b>2-Olefin Mixtures in Nitrogen</b> cis-2-Butene, trans-2-Butene, cis-2-Pentene, trans-2-Pentene, cis-2-Hexene, trans-2-Hexene each at 15 ppm	<b>GMT10351</b>			TH				6R
<b>C2 to C6 Olefin Mixtures in Helium</b> Ethylene, Propylene, 1-Butene, 1-Pentene, 1-Hexene, each at 100 ppm	<b>GMT10414</b>			TH				6R
Ethylene, Propylene, 1-Butene, 1-Pentene, 1-Hexene, each at 1000 ppm	<b>GMT10358</b>			TH				6R
<b>C2 to C6 Olefin Mixtures in Nitrogen</b> Ethylene, Propylene, 1-Butene, 1-Pentene, 1-Hexene, each at 100 ppm	<b>GMT10413</b>			TH				6R
Ethylene, Propylene, 1-Butene, 1-Pentene, 1-Hexene, each at 1000 ppm	<b>GMT10430</b>			TH				6R
<b>C1 to C6 n-Paraffins Mixtures in Helium</b> Methane, Ethane, Propane, Butane, Pentane, Hexane each at 100 ppm	<b>GMT10409</b>			TH				6R
Methane, Ethane, Propane, Butane, Pentane, Hexane each at 1000 ppm	<b>GMT10411</b>			TH				6R
<b>C1 to C6 n-Paraffins Mixtures in Nitrogen</b> Methane, Ethane, Propane, Butane, Pentane, Hexane each at 15 ppm	<b>GMT10408</b>	TK	TB	TH	TG		TD	6R
Methane, Ethane, Propane, Butane, Pentane, Hexane each at 100 ppm	<b>GMT10410</b>	TK	TB	TH	TG		TD	6R
Methane, Ethane, Propane, Butane, Pentane, Hexane each at 1000 ppm	<b>GMT10411</b>	TK	TB	TH	TG		TD	6R
<b>Branched Paraffins Mixtures in Nitrogen</b> Isobutane, 2-Methylbutane, 2,2-Dimethylpropane, 2-Methylpentane, 3-Methylpentane, 2,2-Dimethylbutane each at 15 ppm	<b>GMT10407</b>			TH				6R
<b>Carbon Monoxide, Carbon Dioxide in Nitrogen</b> 25 ppm Carbon Monoxide 1000 ppm Carbon Dioxide	<b>GMT10053</b>			TH				6R
<b>Carbon Monoxide, Carbon Dioxide, Methane, Ethane, Ethylene, Acetylene in Nitrogen</b> each at 1 %	<b>GMT10402</b>	TK	TB	TH	TG		TD	6R



**Calibration Products for Laboratory Analysis**

**Multicomponent Mixtures (continued)**

Product Description	Base Code	MicroMAT™/MiniMAT™ Cylinders						
		10	17	58	105	116	221	6R
<b>Carbon Monoxide, Carbon Dioxide, Methane, Hydrogen, Oxygen in Nitrogen,</b> <i>each at 1%</i>	<b>GMT10403</b>	TK	TB	TH	TG		TD	6R
<b>Carbon Dioxide, Carbon Monoxide, Nitrogen, Oxygen, Methane, Hydrogen in Helium</b> 5 % Carbon Dioxide 5 % Carbon Monoxide 5 % Nitrogen 4 % Oxygen 4 % Methane 4 % Hydrogen	<b>GMT10404</b>		TB		TG			6R
<b>Carbon Dioxide, Carbon Monoxide, Oxygen in Nitrogen</b> 15 % Carbon Dioxide 7 % Carbon Monoxide 5 % Oxygen	<b>GMT10348</b>	TK	TB	TH	TG		TD	6R
<b>Carbon Dioxide, Carbon Monoxide, Oxygen, Methane in Nitrogen</b> 15 % Carbon Dioxide 7 % Carbon Monoxide 5 % Oxygen 4.5 % Methane	<b>GMT10406</b>	TK	TB	TH	TG		TD	6R
<b>Carbon Dioxide, Carbon Monoxide, Oxygen, Hydrogen in Nitrogen,</b> <i>each at 0.5%</i>	<b>GMT10401</b>	TK	TB	TH	TG		TD	6R
<b>Carbon Dioxide, Carbon Monoxide, Oxygen, Hydrogen in Nitrogen</b> 0 % Carbon Dioxide 0 % Carbon Monoxide 0 % Oxygen 5 % Hydrogen	<b>GMT10428</b>	TK	TB	TH	TG		TD	6R
<b>Carbon Dioxide, Oxygen in Nitrogen</b> 1 % Carbon Dioxide 1 % Oxygen	<b>GMT10429</b>	TK	TB	TH	TG		TD	6R
1 % Carbon Dioxide 2 % Oxygen	<b>GMT10420</b>	TK	TB	TH	TG		TD	6R
2 % Carbon Dioxide 24 % Oxygen	<b>GMT10350</b>	TK	TB	TH	TG		TD	6R
3 % Carbon Dioxide 17 % Oxygen	<b>GMT10352</b>	TK	TB	TH	TG		TD	6R

**WARNING:** This product can expose you to chemicals including Benzene, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**WARNING:** This product can expose you to chemicals including Ethylbenzene, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**WARNING:** This product can expose you to chemicals including Toluene, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**WARNING:** This product can expose you to chemicals including 1,3-Butadiene, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**WARNING:** This product can expose you to chemicals including Carbon Monoxide, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

# Nippon Sanso Matheson Portables™ Calibration Products for Air Toxics Monitoring



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

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

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

**WARNING:** This product can expose you to chemicals including Benzene, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**WARNING:** This product can expose you to chemicals including Carbon Tetrachloride, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**WARNING:** This product can expose you to chemicals including Ethylbenzene, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**WARNING:** This product can expose you to chemicals including Styrene, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**WARNING:** This product can expose you to chemicals including p-Dichlorobenzene, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**WARNING:** This product can expose you to chemicals including Toluene, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**WARNING:** This product can expose you to chemicals including Tetrachloroethylene (Perchloroethylene), which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**WARNING:** This product can expose you to chemicals including Chloroform, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**WARNING:** This product can expose you to chemicals including Methyl Bromide, as a structural fumigant, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**WARNING:** This product can expose you to chemicals including Methyl Chloride, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**WARNING:** This product can expose you to chemicals including Vinyl chloride, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

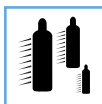
**WARNING:** This product can expose you to chemicals including 1,1-Dichloroethane, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**WARNING:** This product can expose you to chemicals including 1,2-Dichloropropane, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**WARNING:** This product can expose you to chemicals including Trichloroethylene, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**WARNING:** This product can expose you to chemicals including 1,1,2,2-Tetrachloroethane, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

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



# Nippon Sanso Matheson Portables™

## Calibration Products for Air Toxics Monitoring

### 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	1,1,2,2-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

WARNING: This product can expose you to chemicals including Ethylbenzene, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

WARNING: This product can expose you to chemicals including Styrene, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

WARNING: This product can expose you to chemicals including p-Dichlorobenzene, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

WARNING: This product can expose you to chemicals including Ethylene dibromide, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

WARNING: This product can expose you to chemicals including 1,3-Butadiene, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

WARNING: This product can expose you to chemicals including Toluene, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

WARNING: This product can expose you to chemicals including Carbon Tetrachloride, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

WARNING: This product can expose you to chemicals including Chloroform, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

WARNING: This product can expose you to chemicals including Benzene, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

WARNING: This product can expose you to chemicals including Methyl Bromide, as a structural fumigant, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

WARNING: This product can expose you to chemicals including Methyl Chloride, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

WARNING: This product can expose you to chemicals including Vinyl chloride, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

WARNING: This product can expose you to chemicals including Carbon Disulfide, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

WARNING: This product can expose you to chemicals including Bromoform, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

WARNING: This product can expose you to chemicals including 1,1-Dichloroethane, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

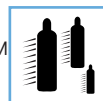
WARNING: This product can expose you to chemicals including 1,2-Dichloropropane, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

WARNING: This product can expose you to chemicals including Trichloroethylene, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

WARNING: This product can expose you to chemicals including 1,1,2,2-Tetrachloroethane, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

WARNING: This product can expose you to chemicals including Hexachlorobutadiene, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

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



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

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

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

**WARNING:** This product can expose you to chemicals including Acrylonitrile, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**WARNING:** This product can expose you to chemicals including Methyl Isobutyl Ketone (MIBK), which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**WARNING:** This product can expose you to chemicals including Ethyl Acrylate, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**WARNING:** This product can expose you to chemicals including Vinyl Bromide, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**WARNING:** This product can expose you to chemicals including Methanol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

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

### 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	

**WARNING:** This product can expose you to chemicals including Ethylbenzene, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**WARNING:** This product can expose you to chemicals including Styrene, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**WARNING:** This product can expose you to chemicals including p-Dichlorobenzene, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**WARNING:** This product can expose you to chemicals including Benzene, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

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

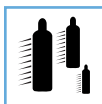
### Chloro-MAT™ Calibration Standard

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	

**WARNING:** This product can expose you to chemicals including Tetrachloroethylene (Perchloroethylene), which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**WARNING:** This product can expose you to chemicals including Carbon Tetrachloride, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**WARNING:** This product can expose you to chemicals including Chloroform, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).



## Calibration Products for Air Toxics Monitoring

### Chloro-MAT™ Calibration Standard (continued)

**WARNING:** This product can expose you to chemicals including Methyl Chloride, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**WARNING:** This product can expose you to chemicals including 1,1-Dichloroethane, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**WARNING:** This product can expose you to chemicals including 1,2-Dichloropropane, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**WARNING:** This product can expose you to chemicals including Trichloroethylene, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**WARNING:** This product can expose you to chemicals including 1,1,2,2-Tetrachloroethane, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

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

### 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 <sub>3</sub>	103L	G0818253	G0818353

### Chromo-MAT-3™ Calibration Standard

Bromochloromethane 1,4-Difluorobenzene

Chlorobenzene-d5 Balance VOC Free Nitrogen

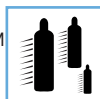
Cylinder Size	Cylinder Pressure (psi)	Contents		1 ppm Item Code	100 ppb Item Code
		US	Metric		
6R	1,775	3.65 ft <sub>3</sub>	103L	G0818653	G0818753

### 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 <sub>3</sub>	103L	G0819053	G0819153

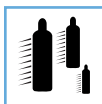


## Pure Gases in Matheson Lecture Bottles

The Nippon Sanso Matheson Lecture Bottle is the original transportable cylinder. Currently, Nippon Sanso 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	<b>G2001375</b>	2 ft <sup>3</sup>	56 L	1,775	170
Ammonia	Anhydrous	<b>G1501275</b>	0.375 lb	170 gm	114	170
Argon	Matheson	<b>G1811181</b>	1.9 ft <sup>3</sup>	54 L	1,800	580
	Ultra High Purity	<b>G1901175</b>	1.8 ft <sup>3</sup>	52 L	1,775	170
Boron Trichloride	CP	<b>G1502186</b>	1 lb	454 gm	4	180
Boron Trifluoride	CP	<b>G1503175</b>	0.375 lb	170 gm	1,600	180
1,3 Butadiene	Instrument	<b>G2429175</b>	0.375 lb	170 gm	21	170
	CP	<b>G1311175</b>	0.375 lb	170 gm	21	170
n-Butane	Ultra High Purity	<b>G1905075</b>	0.375 lb	170 gm	17	170
	Instrument	<b>G2423175</b>	0.375 lb	170 gm	17	170
	CP	<b>G1317275</b>	0.375 lb	170 gm	17	170
1-Butene	CP	<b>G1323175</b>	0.375 lb	170 gm	23	170
2-Butene ( <i>cis</i> & <i>trans</i> )	Technical	<b>G1338175</b>	0.375 lb	170 gm	14	170
2-Butene ( <i>cis</i> )	Technical	<b>G1328175</b>	0.375 lb	170 gm	13	170
2-Butene ( <i>trans</i> )	Technical	<b>G1333175</b>	0.375 lb	170 gm	15	170
Carbon Dioxide	CP	<b>G1123175</b>	0.5 lb	227 gm	838	170
	Anaerobe Purity	<b>G1123275</b>	0.5 lb	227 gm	838	170
Carbon Monoxide	Ultra High Purity	<b>G1918775</b>	1.6 ft <sup>3</sup>	45 L	1,500	170
	CP	<b>G1132275</b>	1.6 ft <sup>3</sup>	45 L	1,500	170
	Technical	<b>G1132175</b>	1.6 ft <sup>3</sup>	45 L	1,500	170
Chlorine	Ultra High Purity	<b>G1919175</b>	1 lb	454 gm	85	180
Dimethylamine	CP	<b>G1522175</b>	0.375 lb	170 gm	26	180
Dimethylether	CP	<b>G1410175</b>	0.375 lb	170 gm	62	170
Ethane	Research	<b>G2243181</b>	0.33 lb	150 gm	543	350
	Matheson	<b>G1827181</b>	0.33 lb	150 gm	543	350
	Ultra High Purity	<b>G1920175</b>	0.25 lb	113 gm	544	170
	CP	<b>G1353275</b>	0.25 lb	113 gm	544	170
	Technical	<b>G1353175</b>	0.25 lb	113 gm	544	170
Ethylene	Research	<b>G2250181</b>	0.31 lb	140 gm	1,200	350
	Matheson	<b>G1827182</b>	0.31 lb	140 gm	1,200	350
	Ultra High Purity	<b>G1920875</b>	0.25 lb	113 gm	1,200	170
	CP	<b>G1358275</b>	0.25 lb	113 gm	1,200	170
	Technical	<b>G1358175</b>	0.25 lb	113 gm	1,200	170
	Polymer	<b>G1358475</b>	0.25 lb	113 gm	1,200	170
Helium	Ultra High Purity	<b>G1929175</b>	1.8 ft <sup>3</sup>	52 L	1,775	170
Hexafluoropropylene	CP	<b>G1466675</b>	1 lb	454 gm	85	170
Hydrogen	Ultra High Purity	<b>G1939175</b>	1.8 ft <sup>3</sup>	52 L	1,775	170
Hydrogen Bromide	CP	<b>G1528175</b>	1 lb	454 gm	320	180
Hydrogen Chloride	Technical	<b>G1531175</b>	0.5 lb	227 gm	613	180
Hydrogen Fluoride	Ultra High Purity	<b>G1534175</b>	0.5 lb	227 gm	1	180
	CP	<b>G1534375</b>	0.5 lb	227 gm	1	180
Hydrogen Sulfide	CP	<b>G1540275</b>	0.5 lb	227 gm	252	180
	Technical	<b>G1540175</b>	0.5 lb	227 gm	252	180

**Complete Gas Listing****Pure Gases in Nippon Sanso Matheson Lecture Bottles** (continued)

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

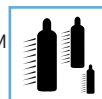
**WARNING:** This product can expose you to chemicals including 1,3-Butadiene, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**WARNING:** This product can expose you to chemicals including Carbon Monoxide, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**WARNING:** This product can expose you to chemicals including Methyl Chloride, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**WARNING:** This product can expose you to chemicals including Nitrous Oxide, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**WARNING:** This product can expose you to chemicals including Sulfur Dioxide, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

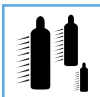


## Pure Gases

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

## Two Component Mixtures

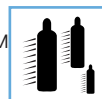
Product Description	Base Code	MicroMAT™/MiniMAT™ Cylinders						
		10	17	58	105	116	221	6R
<b>Acetylene</b>								
1 % Acetylene in Helium	GMT10303			TH				
1 % Acetylene in Nitrogen	GMT10304			TH				
<b>Ammonia</b>								
25 ppm Ammonia in Nitrogen	GMT10519			TH		TM		6R
50 ppm Ammonia in Nitrogen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



# Complete Gas Listing

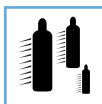
## Two Component Mixtures (continued)

Product Description	Base Code	MicroMATTM/MiniMATTM Cylinders						
		10	17	58	105	116	221	6R
<b>Carbon Dioxide (continued)</b>								
1 % Carbon Dioxide in Nitrogen	GMT10309	TK		TH	TG		6R	
2.5 % Carbon Dioxide in Nitrogen	GMT10523	TK	TB	TH	TG		TD	6R
5 % Carbon Dioxide in Nitrogen	GMT10524	TK	TB	TH	TG		TD	6R
10 % Carbon Dioxide in Nitrogen	GMT10525	TK	TB	TH	TG		TD	6R
<b>Carbon Monoxide</b>								
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
<b>Chlorine</b>								
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				
<b>Ethane</b>								
1.5 % Ethane in Air	GMT10032	TK	TB	TH	TG		TD	6R
100 ppm Ethane in Helium	GMT10423	TK	TB	TH	TG		TD	6R
1000 ppm Ethane in Helium	GMT10422	TK	TB	TH	TG		TD	6R
1 % Ethane in Helium	GMT10421	TK	TB	TH	TG		TD	6R
<b>Ethylene</b>								
8-10 ppm Ethylene in Air	GMT10354	TK	TB	TH	TG		TD	6R
100 ppm Ethylene in Helium	GMT10325	TK	TB	TH	TG		TD	6R
1000 ppm Ethylene in Helium	GMT10333	TK	TB	TH	TG		TD	6R
8-10 ppm Ethylene in Nitrogen	GMT10322	TK	TB	TH	TG		TD	6R
1000 ppm Ethylene in Nitrogen	GMT10334	TK	TB	TH	TG		TD	6R
1 % Ethylene in Nitrogen	GMT10311	TK	TB	TH	TG		TD	6R
<b>Ethylene Oxide</b>								
10 ppm Ethylene Oxide in Nitrogen	GMT10535			TH		TM		6R
<b>Halocarbon 12</b>								
1000 ppm Halocarbon 12 in Nitrogen	GMT10536	TK	TB	TH	TG		TD	6R
<b>Hexane</b>								
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
<b>Hydrogen</b>								
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		TB	TH	TG		TD	6R
100 ppm Hydrogen in Nitrogen	GMT10332	TK	TB	TH	TG		TD	6R
1000 ppm Hydrogen in Nitrogen	GMT10335	TK	TB	TH	TG		TD	6R
1 % Hydrogen in Nitrogen	GMT10328	TK	TB	TH	TG		TD	6R



Two Component Mixtures (continued)

Product Description	Base Code	MicroMAT™/MiniMAT™ Cylinders						
		10	17	58	105	116	221	6R
<b>Hydrogen Chloride</b>								
5 ppm Hydrogen Chloride in Nitrogen	GMT10542			TH				
10 ppm Hydrogen Chloride in Nitrogen	GMT10543			TH				
50 ppm Hydrogen Chloride in Nitrogen	GMT10544			TH				
<b>Hydrogen Cyanide</b>								
5 ppm Hydrogen Cyanide in Nitrogen	GMT10545			TH				
10 ppm Hydrogen Cyanide in Nitrogen	GMT10546			TH				
<b>Hydrogen Sulfide</b>								
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
<b>Isobutane</b>								
100 ppm Isobutane in Air	GMT10045	TK		TH	TG			6R
<b>Isobutylene</b>								
50 ppm Isobutylene in Air	GMT10549	TK	TB	TH	TG		TD	6R
100 ppm Isobutylene in Air	GMT10047	TK	TB	TH	TG		TD	6R
<b>Methane</b>								
10 ppm Methane in Air	GMT10034	TK	TB	TH	TG		TD	6R
100 ppm Methane in Air	GMT10035	TK	TB	TH	TG		TD	6R
20 % LEL (1.0%) Methane in Air	GMT10038	TK	TB	TH	TG		TD	6R
30 % LEL (1.5%) Methane in Air	GMT10550	TK	TB	TH	TG		TD	6R
50 % LEL (2.5%) Methane in Air	GMT10039	TK	TB	TH	TG		TD	6R
100 ppm Methane in Helium	GMT10337	TK		TH				
1000 ppm Methane in Helium	GMT10336	TK		TH				
1% Methane in Helium	GMT10312	TK		TH				
10 % Methane in Helium	GMT10320	TK						
100 ppm Methane in Nitrogen	GMT10341	TK		TH				
1000 ppm Methane in Nitrogen	GMT10339	TK		TH				
1% Methane in Nitrogen	GMT10338	TK	TB	TH	TG		TD	6R
5 % Methane in Nitrogen	GMT10551	TK	TB	TH	TG		TD	6R
10 % Methane in Nitrogen	GMT10321	TK						
<b>Nitrogen</b>								
100 ppm Nitrogen in Helium	GMT10343	TK		TH				
1000 ppm Nitrogen in Helium	GMT10340	TK		TH				
1% Nitrogen in Helium	GMT10315	TK		TH				
<b>Nitric Oxide</b>								
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
<b>Nitrogen Dioxide</b>								
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



## Complete Gas Listing

### Two Component Mixtures (continued)

Product Description	Base Code	MicroMATTM/MiniMATTM Cylinders						
		10	17	58	105	116	221	6R
<b>Nitrous Oxide</b>								
100 ppm Nitrous Oxide in Helium	GMT10345	TK		TH				
1 % Nitrous Oxide in Helium	GMT10316	TK		TH				
10 % Nitrous Oxide in Helium	GMT10323	TK		TH				
0.1 ppm Nitrous Oxide in Nitrogen	GMT10302			TH				
1 ppm Nitrous Oxide in Nitrogen	GMT10349	TK		TH				
100 ppm Nitrous Oxide in Nitrogen	GMT10346	TK		TH				
1000 ppm Nitrous Oxide in Nitrogen	GMT10342	TK		TH				
<b>Oxygen</b>								
100 ppm Oxygen in Helium	GMT10353	TK	TB	TH	TG		TD	6R
1 % Oxygen in Helium	GMT10317	TK	TB	TH	TG		TD	6R
10 % Oxygen in Helium	GMT10324	TK	TB	TH	TG		TD	6R
100 ppm Oxygen in Nitrogen	GMT10347	TK	TB	TH	TG		TD	6R
1 % Oxygen in Nitrogen	GMT10318	TK	TB	TH	TG		TD	6R
2 % Oxygen in Nitrogen	GMT10356	TK	TB	TH	TG		TD	6R
6 % Oxygen in Nitrogen	GMT10357	TK	TB	TH	TG		TD	6R
10 % Oxygen in Nitrogen	GMT10326	TK	TB	TH	TG		TD	6R
19 % Oxygen in Nitrogen	GMT10042	TK	TB	TH	TG		TD	6R
20.9 % Oxygen in Nitrogen	GMT10584	TK	TB	TH	TG		TD	6R
<b>Pentane</b>								
25 % LEL (0.35%) Pentane in Air	GMT10558	TK	TB	TH	TG		TD	6R
50 % LEL (0.70%) Pentane in Air	GMT10559	TK	TB	TH	TG		TD	6R
<b>Propane</b>								
10 ppm Propane in Air	GMT10560	TK	TB	TH	TG		TD	6R
30 % LEL (0.63%) Propane in Air	GMT10561	TK	TB	TH	TG		TD	6R
50 % LEL (1.05%) Propane in Air	GMT10562	TK	TB	TH	TG		TD	6R
<b>Sulfur Dioxide</b>								
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
<b>1,1,1-Trichloroethane</b>								
10 ppm 1,1,1-Trichloroethane in Nitrogen	GMT10301			TH				6R
<b>Trichloroethylene</b>								
10 ppm Trichloroethylene in Nitrogen	GMT10359			TH				6R
<b>Vinyl Chloride</b>								
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			TH				6R
100 ppm Vinyl Chloride in Nitrogen	GMT10360			TH				6R
1000 ppm Vinyl Chloride in Nitrogen	GMT10361			TH				6R

**WARNING:** This product can expose you to chemicals including Benzene, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**WARNING:** This product can expose you to chemicals including 1,3-Butadiene, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**WARNING:** This product can expose you to chemicals including Carbon Monoxide, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**WARNING:** This product can expose you to chemicals including Nitrous Oxide, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).



## Complete Gas Listing

### Two Component Mixtures (continued)

⚠WARNING: This product can expose you to chemicals including Vinyl chloride, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

⚠WARNING: This product can expose you to chemicals including Ethylene Oxide, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

⚠WARNING: This product can expose you to chemicals including Trichloroethylene, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

⚠WARNING: This product can expose you to chemicals including Hydrogen cyanide (HCN) and cyanide salts (CN salts), which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

### Multicomponent Mixtures

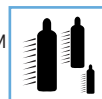
Product Description	Base Code	MicroMAT™/MiniMAT™ Cylinders						
		10	17	58	105	116	221	6R
<b>BTEX Mixtures in Nitrogen</b>								
Benzene, Ethyl Benzene, Toluene, Xylene 1 ppm BTEX Mixture	GMT10231			TH				6R
10 ppm BTEX Mixture	GMT10417			TH				6R
100 ppb BTEX Mixture	GMT10232			TH				6R
<b>2 to C<sub>4</sub> Alkyne in Nitrogen</b>								
Acetylene, 1-Butyne, 2-Butyne, Propyne each at 15 ppm	GMT10412			TH				6R
<b>Carbon Monoxide, Methane in Air</b>								
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
<b>Carbon Monoxide, Pentane in Air</b>								
50 ppm Carbon Monoxide 30 % LEL (0.42%) Pentane	GMT10569	TK	TB	TH	TG		TD	6R
<b>Carbon Monoxide, Propane in Air</b>								
50 ppm Carbon Monoxide 50 % LEL (1%) Propane	GMT10570	TK	TB	TH	TG		TD	6R
<b>Methane, Oxygen in Air</b>								
50 ppm Methane 17 % Oxygen	GMT10581	TK	TB	TH	TG		TD	6R
<b>Pentane, Oxygen in Nitrogen</b>								
25 % LEL (0.35%) Pentane 19 % Oxygen	GMT10582	TK	TB	TH	TG		TD	6R
<b>Carbon Dioxide, Oxygen in Nitrogen</b>								
1 % Carbon Dioxide 1 % Oxygen	GMT10429	TK	TB	TH	TG		TD	6R
1 % Carbon Dioxide 2 % Oxygen	GMT10420	TK	TB	TH	TG		TD	6R
2 % Carbon Dioxide 24 % Oxygen	GMT10350	TK	TB	TH	TG		TD	6R
3 % Carbon Dioxide 17 % Oxygen	GMT10352	TK	TB	TH	TG		TD	6R



## Complete Gas Listing

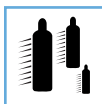
### Multicomponent Mixtures (continued)

Product Description	Base Code	MicroMAT™/MiniMAT™ Cylinders						
		10	17	58	105	116	221	6R
<b>Carbon Monoxide, Methane, Oxygen in Nitrogen</b> 100 ppm Carbon Monoxide 50 % LEL (2.5%) Methane 19 % Oxygen	GMT10571	TK	TB	TH	TG		TD	6R
<b>Carbon Monoxide, Pentane, Oxygen in Nitrogen</b> 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
<b>Carbon Monoxide, Methane, Hydrogen Sulfide in Air</b> 50 ppm Carbon Monoxide 50 % LEL (2.5%) Methane 25 ppm Hydrogen Sulfide	GMT10574			TH			TM	6R
<b>Carbon Monoxide, Pentane, Hydrogen Sulfide in Air</b> 50 ppm Carbon Monoxide 30 % LEL (0.42%) Pentane 25 ppm Hydrogen Sulfide	GMT10575			TH			TM	6R
<b>Carbon Monoxide, Methane, Hydrogen Sulfide, Oxygen in Nitrogen</b> 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
<b>Carbon Monoxide, Pentane, Hydrogen Sulfide, Oxygen in Nitrogen</b> 100 ppm Carbon Monoxide 25 % LEL (0.35%) Pentane 25 ppm Hydrogen Sulfide 19 % Oxygen	GMT10580			TH			TM	6R



**Multicomponent Mixtures** *(continued)*

Product Description	Base Code	MicroMAT™/MiniMAT™ Cylinders						
		10	17	58	105	116	221	6R
<b>Methane, Ethane, Ethylene, Acetylene, Propane, Propylene, Propyne, n-Butane in Nitrogen</b> <i>each at 15 ppm</i>	<b>GMT10415</b>			TH				6R
<b>n-Butane, Isobutane, cis-2-Butene, trans-2-Butene, 1-Butene, Isobutylene, 1,3-Butadiene, Ethyl Acetylene, in Nitrogen</b> <i>each at 15 ppm</i>	<b>GMT10416</b>			TH				6R
<b>2-Olefin Mixtures in Nitrogen</b> cis-2-Butene, trans-2-Butene, cis-2-Pentene trans-2-Pentene, cis-2-Hexene, trans-2-Hexene <i>each at 15 ppm</i>	<b>GMT10351</b>			TH				6R
<b>C2 to C6 Olefin Mixtures in Helium</b> Ethylene, Propylene, 1-Butene, 1-Pentene, 1-Hexene, <i>each at 100 ppm</i>	<b>GMT10414</b>			TH				6R
Ethylene, Propylene, 1-Butene, 1-Pentene, 1-Hexene, <i>each at 1000 ppm</i>	<b>GMT10358</b>			TH				6R
<b>C2 to C6 Olefin Mixtures in Nitrogen</b> Ethylene, Propylene, 1-Butene, 1-Pentene, 1-Hexene, <i>each at 100 ppm</i>	<b>GMT10413</b>			TH				6R
Ethylene, Propylene, 1-Butene, 1-Pentene, 1-Hexene, <i>each at 1000 ppm</i>	<b>GMT10450</b>			TH				6R
<b>C1 to C6 n-Paraffins Mixtures in Helium</b> Methane, Ethane, Propane, Butane, Pentane, Hexane <i>each at 100 ppm</i>	<b>GMT10409</b>			TH				6R
Methane, Ethane, Propane, Butane, Pentane, Hexane <i>each at 1000 ppm</i>	<b>GMT10411</b>			TH				6R
<b>C1 to C6 n-Paraffins Mixtures in Nitrogen</b> Methane, Ethane, Propane, Butane, Pentane, Hexane <i>each at 15 ppm</i>	<b>GMT10408</b>	TK	TB	TH	TG		TD	6R
Methane, Ethane, Propane, Butane, Pentane, Hexane <i>each at 100 ppm</i>	<b>GMT10410</b>	TK	TB	TH	TG		TD	6R
Methane, Ethane, Propane, Butane, Pentane, Hexane <i>each at 1000 ppm</i>	<b>GMT10355</b>	TK		TH	TG		TD	6R
<b>Branched Paraffins Mixtures in Nitrogen</b> Isobutane, 2-Methylbutane, 2,2-Dimethylpropane, 2-Methylpentane 3-Methylpentane, 2,2-Dimethylbutane <i>each at 15 ppm</i>	<b>GMT10407</b>			TH				6R
<b>Carbon Monoxide, Carbon Dioxide in Nitrogen</b> 25 ppm Carbon Monoxide 1000 ppm Carbon Dioxide	<b>GMT10053</b>			TH				6R



## Complete Gas Listing

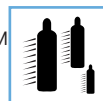
### Multicomponent Mixtures (continued)

Product Description	Base Code	MicroMAT™/MiniMAT™Cylinders						
		10	17	58	105	116	221	6R
<b>Carbon Monoxide, Carbon Dioxide, Methane, Ethane, Ethylene, Acetylene in Nitrogen, each at 1%</b>	<b>GMT10402</b>	<b>TK</b>	<b>TB</b>	<b>TH</b>	<b>TG</b>		<b>TD</b>	<b>6R</b>
<b>Carbon Monoxide, Carbon Dioxide, Methane, Hydrogen, Oxygen in Nitrogen, each at 1%</b>	<b>GMT10403</b>	<b>TK</b>	<b>TB</b>	<b>TH</b>	<b>TG</b>		<b>TD</b>	<b>6R</b>
<b>Carbon Dioxide, Carbon Monoxide, Nitrogen, Oxygen, Methane, Hydrogen in Helium</b> 5 % Carbon Dioxide 5 % Carbon Monoxide 5 % Nitrogen 4 % Oxygen 4 % Methane 4 % Hydrogen	<b>GMT10404</b>		<b>TB</b>					
<b>Carbon Dioxide, Carbon Monoxide, Oxygen in Nitrogen</b> 15 % Carbon Dioxide 7 % Carbon Monoxide 5 % Oxygen	<b>GMT10348</b>	<b>TK</b>	<b>TB</b>	<b>TH</b>	<b>TG</b>		<b>TD</b>	<b>6R</b>
<b>Carbon Dioxide, Carbon Monoxide, Oxygen, Methane in Nitrogen</b> 15 % Carbon Dioxide 7 % Carbon Monoxide 4 % Oxygen 4.5 % Methane	<b>GMT10406</b>	<b>TK</b>	<b>TB</b>	<b>TH</b>	<b>TG</b>		<b>TD</b>	<b>6R</b>
<b>Carbon Dioxide, Carbon Monoxide, Oxygen, Hydrogen in Nitrogen, each at 0.5%</b>	<b>GMT10401</b>	<b>TK</b>	<b>TB</b>	<b>TH</b>	<b>TG</b>		<b>TD</b>	<b>6R</b>
<b>Carbon Dioxide, Carbon Monoxide, Oxygen, Hydrogen in Nitrogen</b> 0 % Carbon Dioxide 0 % Carbon Monoxide 0 % Oxygen 5 % Hydrogen	<b>GMT10428</b>	<b>TK</b>	<b>TB</b>	<b>TH</b>	<b>TG</b>		<b>TD</b>	<b>6R</b>

**WARNING:** This product can expose you to chemicals including 1,3-Butadiene, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**WARNING:** This product can expose you to chemicals including Toluene, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**WARNING:** This product can expose you to chemicals including Carbon Monoxide, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).



## 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
<b>3344-C10</b>	3344 Regulator with C10 Fitting and 0.3 SLPM Flow Rate
<b>3344-C10C</b>	3344 Regulator with C10 Fitting and 0.5 SLPM Flow Rate
<b>3344-C10E</b>	3344 Regulator with C10 Fitting and 1.0 SLPM Flow Rate
<b>3344-C10F</b>	3344 Regulator with C10 Fitting and 1.5 SLPM Flow Rate
<b>3344-C10G</b>	3344 Regulator with C10 Fitting and 2.5 SLPM Flow Rate
<b>3345-C10</b>	3345 Regulator with C10 Fitting and 0.3 SLPM Flow Rate
<b>3345-C10C</b>	3345 Regulator with C10 Fitting and 0.5 SLPM Flow Rate
<b>3345-C10E</b>	3345 Regulator with C10 Fitting and 1.0 SLPM Flow Rate
<b>3345-C10F</b>	3345 Regulator with C10 Fitting and 1.5 SLPM Flow Rate
<b>3345-C10G</b>	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
<b>3347-160</b>	3347 Regulator with CGA 160, Variable Flow
<b>3347-C10</b>	3347 Regulator with C10 fitting, Variable Flow
<b>3347-165</b>	3347 Regulator with CGA 165, Variable Flow
<b>3347-600</b>	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
<b>3359-C10</b>	3359 Regulator with C10 Fitting and 0.3 SLPM Flow Rate
<b>3359-C10C</b>	3359 Regulator with C10 Fitting and 0.5 SLPM Flow Rate
<b>3359-C10E</b>	3359 Regulator with C10 Fitting and 1.0 SLPM Flow Rate
<b>3359-C10F</b>	3359 Regulator with C10 Fitting and 1.5 SLPM Flow Rate
<b>3359-C10G</b>	3359 Regulator with C10 Fitting and 2.5 SLPM Flow Rate
<b>3359HP-C10</b>	3359 Regulator with C10 Fitting and 1200 psig Gauge



# Nippon Sanso Matheson Portables™ MicroMATE™ Equipment

## 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

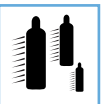
This calibration kit comes with 3 feet of tygon tubing and a sensor head assembly. Nippon Sanso Matheson will assemble this kit to meet your specific calibration kit needs.

### 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



# Nippon Sanso Matheson Portables™ MicroMATE™ Equipment

## 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
<b>KIT-0529-XX</b>	PELgas™ Kit MiniMAT™ 6R
<b>RFM-0029-XX</b>	Preset regulator flowmeter combination
<b>SEN-0021-PD</b>	Calibration cup
<b>TBG-0214-QF</b>	3 feet tygon tubing
<b>WRC-0013-XX</b>	Small adjustable 6" wrench
<b>WAS-0039-PB</b>	CGA-180 teflon washers
<b>CAS-0038-XX</b>	Pelican case with precut foam inserts
<b>HOL-0026-XX</b>	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
<b>KIT-0530-XX</b>	PELgas™ Kit MiniMAT™ 6R
<b>RFM-0030-XX</b>	Preset regulator flowmeter combination with restricting orifice & 1/4" hose barb
<b>SEN-0021-PD</b>	Calibration cup
<b>TBG-0214-QF</b>	3 feet tygon tubing
<b>WRC-0013-XX</b>	Small adjustable 6" wrench
<b>WAS-0039-PB</b>	CGA-180 teflon washers
<b>CAS-0038-XX</b>	Pelican case with precut foam inserts
<b>HOL-0026-XX</b>	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

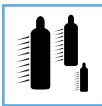
### Ordering Information

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



# Nippon Sanso Matheson Portables™ MicroMATE™ Equipment

## Model RFM-0030 MicroMATE™ Portable Cylinder Regulator Low Flow / Low Pressure Aluminum Regulator



RFM-0030

### Description/Applications

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

### Design Features/Components

- Aluminum body
- Hose barb outlet – 1/4"
- 30 psig delivery pressure
- Available with 0.5 SLPM preset flow rate

### Materials of Construction

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

### Ordering Information

Part Number*	Description	Use with these Cylinders	Cylinder Pressure	Cylinder Pressure Gauge
<b>SEQRF-M0030CGA</b>	RFM Regulator with 0.5 SLPM preset flow rate	MiniMAT™, MiniMAT™-MS	1800 psig	0-3000 psig

\*Note: For ordering, replace letters "CGA" with the valve outlet CGA number for the gas cylinder you are using. Some CGA limitations may apply.

## Model 3590A Series Low Dead Volume Regulator



### 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

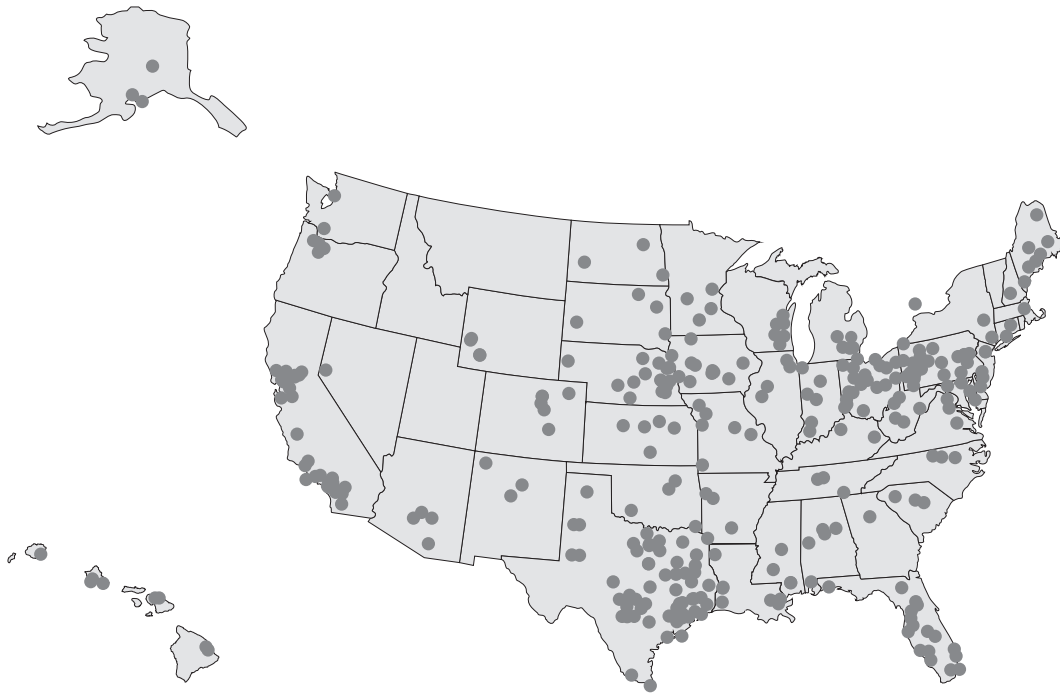
### Description/Applications

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.

Maximum Inlet Pressure:	3000 psig (20,700 kPa)
Maximum Flow Rate: (At 2000 psig, N <sub>2</sub> )	21 SCFH (10 SLPM)
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
<b>3590A-CGA</b>	Low Dead Volume Regulator	CGA 180



[www.us.nipponsanso.com](http://www.us.nipponsanso.com)

800-416-2505

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