



# FIRST-Mate<sup>SM</sup>

## for Emission Testing and Monitoring

*"Experience the Matheson Tri-Gas Commitment to Supply Chain Excellence"*

**Matheson Tri-Gas** is an established manufacturer of NIST traceable emission calibration gas mixtures for both environmental compliance and engine emissions testing. Manufacturers of engines of all types – car, truck, marine, jets, rail, small appliances, etc., need these calibration standards to test engines for production and research. Companies who must monitor stack emissions need these standards for environmental compliance. We offer standard and custom gas mixtures complying with Federal and State regulations, in aluminum and steel cylinders, and in both 1% and 2% certification accuracies.

When repeatability and high volume are keys to your success, Matheson Tri-Gas has UniBlend batch blending technology for 2-100 identical cylinders.

The **Matheson Tri-Gas FIRST-Mate<sup>SM</sup>** Program for Emission Testing and Monitoring will maximize your operating efficiencies by addressing the six key parameters that customers must have from their suppliers to achieve supply chain excellence.

- **Quality** products to ensure consistent reliability and safety
- **Products** specifically designed for Emission Testing and Monitoring
- **Safety** programs, products and design integrity to protect your personnel and work environment
- **Convenience** to place your orders and manage your cylinder inventory, with online access to Certs
- **Support** whenever you need it from our technical and service support teams
- **Delivery** options tailored to your operating needs



### Quality Product Fleet

- **Uniblend:** Matheson can provide up to one hundred identical calibration standards. Identical standards ensure consistency of instrument calibration for testing analyzers.



### Analyzers used for Emissions and Monitoring Testing

Analyzer Name	Measures
NDIR: Non Dispersive Infrared	<ul style="list-style-type: none"> <li>• Carbon Monoxide Levels</li> <li>• Carbon Dioxide Levels</li> </ul>
Chemiluminescent	<ul style="list-style-type: none"> <li>• Nitric Oxide</li> <li>• Nitrogen Dioxide</li> <li>• Total NOx</li> </ul>
FID (Flame Ionization Detector)	<ul style="list-style-type: none"> <li>• Total Hydrocarbons (THC):</li> <li>• Propane as THC</li> </ul>



**MATHESON  
TRI•GAS**

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## Products for Emissions and Monitoring Testing

Analyzer	Test for	Zero Gases	Calibration Gases	Support Gases
NDIR	Carbon Monoxide	Nitrogen	EPA Protocol / MTG CalMat 1: Primary Grade Concentrations from: $\geq 1$ ppm in Nitrogen	MTG CalMat 2: Certified Plus Grade Concentrations from: $\geq 1$ ppm in Nitrogen
NDIR	Carbon Dioxide	Nitrogen	EPA Protocol / MTG CalMat 1: Primary Grade Concentrations from: $\geq 100$ ppm in Nitrogen	MTG CalMat 2: Certified Plus Grade Concentrations from: $\geq 100$ ppm in Nitrogen
Chemiluminescent	NOx	Nitrogen	EPA Protocol / MTG CalMat 1: Primary Grade Concentrations from: $\geq 2$ ppm in Nitrogen	MTG CalMat 2: Certified Plus Grade Concentrations from: $\geq 2$ ppm in Nitrogen
FID	Propane as THC	FID Fuel 40% Hydrogen/ Balance Helium	EPA Protocol / MTG CalMat 1: Primary Grade Concentrations from: $\geq 0.3$ ppm in Air	MTG CalMat 2: Certified Plus Grade Concentrations from: $\geq 0.3$ ppm in Air

## Calibration Gas Chart for Emissions and Monitoring Testing

Polluter	U.S. Regulation	Daily CEMs	Monthly CEMs	Quarterly CEMs	Annual CEMs
VEHICLE Emissions Testing CO, NOx, THC, CO <sub>2</sub> mixes	40CFR Part 86 Engine Mfrs & Research State Monitoring Facilities Local/Garage Monitoring	EPA Protocols, CalMat 1 CalMat 1; CalMat 2 BAR mixes Span Gases CalMat 2 BAR mix	6-point linearity $\pm 2\%$ 6-point linearity $\pm 2\%$		
Industrial & Utility Stacks Plus Cogeneration Plants SO <sub>2</sub> , NOx, O <sub>2</sub> or CO <sub>2</sub>	40CFR Part 60	Daily Zero and Span Check Grade Zero N <sub>2</sub> Gas Span Gas CalMat 2		Cyl. Gas Audit 2-Point Test EPA Protocols	RATA/once/yr EPA Protocols; Agree with Auditor at 20% Accuracy
Acid Rain Utilities SO <sub>2</sub> , NOx, CO <sub>2</sub> diluent	40CFR Part 75	Daily Zero and Span Check EPA Protocols Acid Rain CEM Zero N <sub>2</sub>		Linearity 3-Point Test EPA Protocols	RATA/once/yr EPA Protocols; Agree with Auditor at 10% Accuracy; If agree < 7.5% can exempt one quarterly test
Boiler & Industrial Furnaces SO <sub>2</sub> , NOx, O <sub>2</sub> or CO <sub>2</sub>	40CFR Part 266	Daily Zero and Span Check Grade Zero N <sub>2</sub> Gas Span Gas CalMat 2		Linearity 3-Point Test EPA Protocols	RATA/once/yr EPA Protocols; Agree with Auditor at 15% Accuracy
Municipal Waste Combustors SO <sub>2</sub> , NOx, O <sub>2</sub> or CO <sub>2</sub> Some states require HCl	40CFR Part 60 subpart Ea	Daily Zero and Span Check Grade Zero N <sub>2</sub> Gas Span Gas CalMat 2		Linearity 3-Point Test EPA Protocols	RATA/once/yr EPA Protocols; Agree with Auditor at 15% Accuracy



## **Product** Features Ensure Optional Navigation:

- Certificates of Analysis and Cylinder Tags fully documented with components and certified concentrations, NIST traceability.



## **Safety** Programs for a Safe Voyage:

- **SAFETY-Mate:** Matheson Tri-Gas' lab and process cylinder safety audit to aid in safe gas delivery systems
- On-site safety training
- Safety Equipment products



## **Convenience** via Online Resources:

- Barcode Tracking for Managing Cylinder Status
- Enhanced Service Profile (ESP) Viewing and Ordering
- Self-Service Certs
- Cylinder Management
  - Onsite Cylinder Inventory
  - Cylinder Expiration Notification
  - Cylinder Movement History
  - Cylinder Pickup Scheduling



## **Support** via the Matheson Tri-Gas Bulkhead of Technical and Service Support:

- Specialty Gas Crew who understand emissions testing and monitoring: Product Manager, Technical Service Coordinator, Gas Operations Team and Customer Service
- Personalized service at your door with field sales, and on the phone with dedicated customer service representatives



## **Delivery** to Your Port of Call:

- Designed to suit your facility and operating hours
- Options for delivery

With the FIRST-Mate<sup>SM</sup> Program for SUPPLY CHAIN Excellence, Matheson Tri-Gas is committed, without limitation, to be your "go to" company for maximizing profits and minimizing operating costs.

Thank you for your interest in our specialty gas and equipment products and we look forward to the opportunity to welcome you to our new FIRST-Mate<sup>SM</sup> Program. For more information, please visit the Matheson Tri-Gas website @ [www.mathesontrigas.com](http://www.mathesontrigas.com), or call our customer service center @ **800-416-2505** to have one of our sales representatives contact you directly.

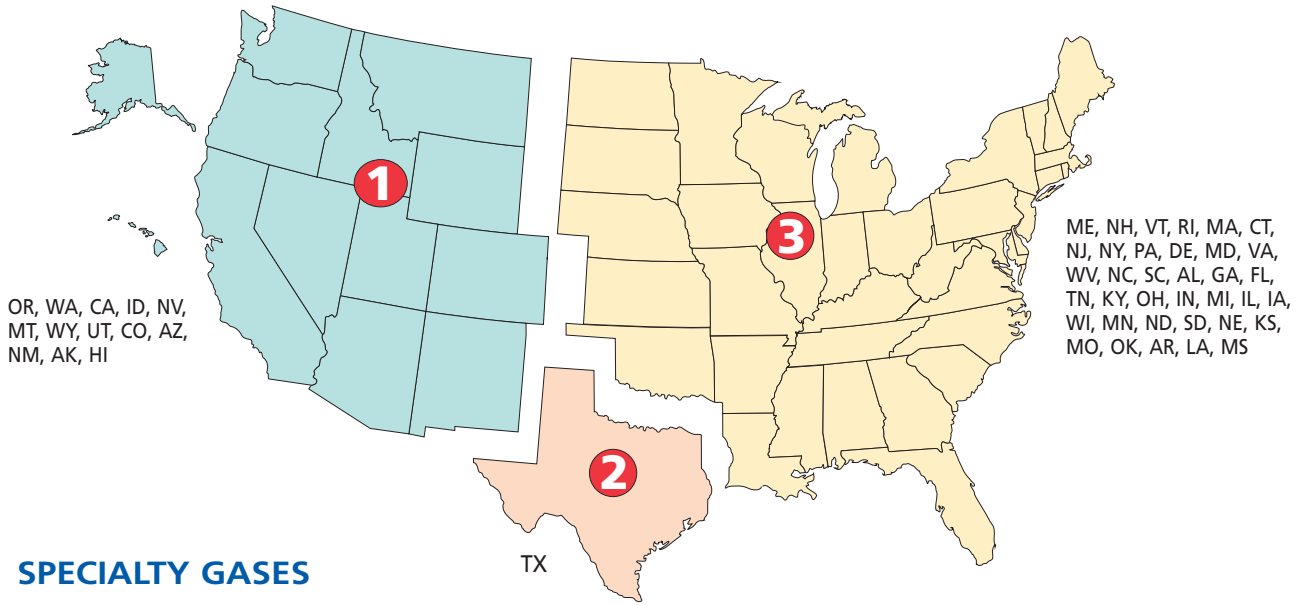




# MATHESON TRI•GAS

## CUSTOMER SERVICE CENTERS

To place an order, or to obtain more information, please contact our Customer Service Center for your area:



### SPECIALTY GASES

- 1** 6775 Central Avenue  
Newark, CA 94560  
Phone: 510-793-2559  
Fax: 510-790-6241  
Email: [mtgnewark@matheson-trigas.com](mailto:mtgnewark@matheson-trigas.com)
- 2** 3106 Pasadena Freeway  
Pasadena, TX 77503  
Phone: 713-534-8217  
Fax: 713-534-8706  
Email: [mtgpasadena@matheson-trigas.com](mailto:mtgpasadena@matheson-trigas.com)  
  
San Antonio and Austin area:  
2550 Kyle Crossing  
Kyle, TX 78640  
Phone: 512-262-2129  
Fax: 512-262-4011  
Email: [mtgkyle@matheson-trigas.com](mailto:mtgkyle@matheson-trigas.com)
- 3** 166 Keystone Drive  
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### INTERNATIONAL

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Fax: 510-790-6241  
Email: [mtgexports@matheson-trigas.com](mailto:mtgexports@matheson-trigas.com)

### SPECIALTY GAS SYSTEMS AND EQUIPMENT

#### WORLDWIDE EQUIPMENT TECHNOLOGY CENTER

166 Keystone Drive  
Montgomeryville, PA 18936  
Phone: 800-828-4313  
Fax: 215-619-0458  
Email: [info@matheson-trigas.com](mailto:info@matheson-trigas.com)

#### 24 HOUR EMERGENCY ASSISTANCE

CHEMTREC Phone: 800-424-9300

#### MATERIAL SAFETY DATA SHEETS (MSDS)

Data Sheets for gases can be downloaded from the Matheson Tri-Gas, Inc. Web site at [www.mathesontrigas.com/msds](http://www.mathesontrigas.com/msds)

#### GENERAL INQUIRIES

[info@matheson-trigas.com](mailto:info@matheson-trigas.com)

#### Equipment Technology Center

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