



FIRST-MateSM for Petrochemical Industries

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

Matheson Tri-Gas services the Petrochemical Industry facilities involved in the production of pure basic chemicals. Petrochemical Industry facilities may include one or more of the following units:

- **Refinery that processes crude oil into raw materials for the Petrochemical units**
- **Ethylene Units → Polyethylene Units**
- **Propylene Units → Polypropylene Units**
- **Butadiene Units**
- **Butene Units**
- **Aromatics Units**

These units may have the following requirements: safety analyses, environmental analyses, process control analyses (analyzer shacks), and finished product analyses. Matheson Tri-Gas has the complex product profile and packaging options required to service the Petrochemical Industry requirements for regulatory compliance, safety, process monitoring, and finished product certification. Matheson Tri-Gas purifies its own C1 to C4 hydrocarbons to ensure the highest purity raw materials, and we have developed the Microshield series of cylinder preparations that ensure the long term stability of sub-ppm reduced sulfur components. Matheson Tri-Gas also applies state-of-the-art gas and liquid mixture engineering software that provides the optimal hydrocarbon mixtures needed by our customers.

The **Matheson Tri-Gas FIRST-MateSM** program for the Petrochemical Industry 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 Petrochemical Industry applications
- **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:

- Custom certs by application
- Active Six Sigma quality program



Products for Petrochemical Facility Environmental Compliance:

WHERE

- Boiler and electricity generating emissions monitoring

GAS STANDARDS NEEDED

CO, NO_x, and CO₂ EPA Protocols and CalMat Daily Standards



**MATHESON
TRI•GAS**

ask. . .The Gas Professionals™



Products for Petrochemical Industry Process Monitoring and Product Certification:

Ethylene and Propylene Units' Process Analyzer and Central Laboratory Standard Gas Mixtures:

Products for trace impurity analyses

- Sub-ppm to 5 ppm CO and CO₂, balance Ethylene or Propylene
- Sub-ppm to 5 ppm COS, Methyl Mercaptan and H₂S, balance Propylene
- 3 ppm and higher Methanol, balance Propylene
- Matheson Tri-Gas Research Grade Ethylene and Propylene with certified impurities
- Cylinders, 6-Packs and 12-packs
 - Helium, Air, Hydrogen, and Nitrogen for gas chromatographs
 - Zero, UHP, and higher gas grades available
- Propylene standards available in gas and liquid phase standards
 - Piston cylinders,
 - Low pressure cylinders*
 - High pressure cylinders*

**Low and high pressure cylinders may have Full Length Eductor Tubes, and either of helium or nitrogen headpressures.*



Aromatics Units' Analyzer Laboratory Standard Gas Mixtures:

- BTEX* gas standards in low pressure (portable or refillable cylinders), and high pressure cylinders.
- Liquid BTEX* component standards in low pressure and high pressure cylinders. Low and high pressure cylinders may have Full Length Eductor Tubes, and either of helium or nitrogen head pressures.

**BTEX is Benzene, Toluene, Ethyl Benzene, ortho Xylene, meta Xylene, and para Xylene.*

Butadiene and Butene Units' Standard Mixtures

- Multi-component C4 impurities balance 1,3 Butadiene or Butene, liquid phase, in low or high pressure cylinders, with Full Length Eductor Tubes, and either of helium or nitrogen head pressures.
- Research purities of n-Butane and iso-Butane are available; commercial purities of Butenes and 1,3 Butadiene are available.
- Liquid mixtures of 1-Butene, Hexane, iso-Butene, iso-Butane, Isoprene, Propane with balance Methyl Chloride are available in low pressure or high pressure cylinders, and either of helium or nitrogen head pressures.



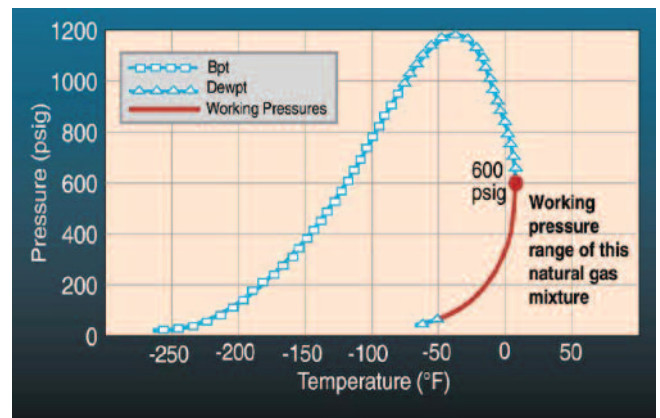
Safety Programs for a Safe Voyage:

- **SAFETY-Mate:** A member of the Matheson Tri-Gas crew provides laboratory and process audits of cylinder safety to aid you with safe gas handling and delivery. Technical recommendations may be provided as well
- On-site safety training
- Catalog listing safety equipment products
- Gas Cabinets and Panels
- Matheson Portables LEL and H₂S/CO/Methane/Air mixtures for your safety and industrial health programs. Many more standard and custom mixtures and pure gases are available



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

- Expert Mixture Phase Engineering using state-of-the-art software
- Specialty Gas Crew who understand refinery products and cylinder package options - (Product Manager, Technical Service Coordinator, Gas Operations Team, and Customer Service Team)
- Sales engineers provide personalized service before you have to "sound the alarm"
- Dedicated customer service representatives assigned to your account – ready with a friendly "ahoy there"
- Matheson Tri-Gas' Customer Arrangements systematize your products and cargo



Convenience via Online Resource

- 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



Delivery to Your Port of Call:

- Local truck delivery if you are local to a Matheson Tri-Gas branch
- Inter-branch trucking system to minimize sourcing costs
- Customer service will expedite shipments in an urgent need situation



With the FIRST-MateSM 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.

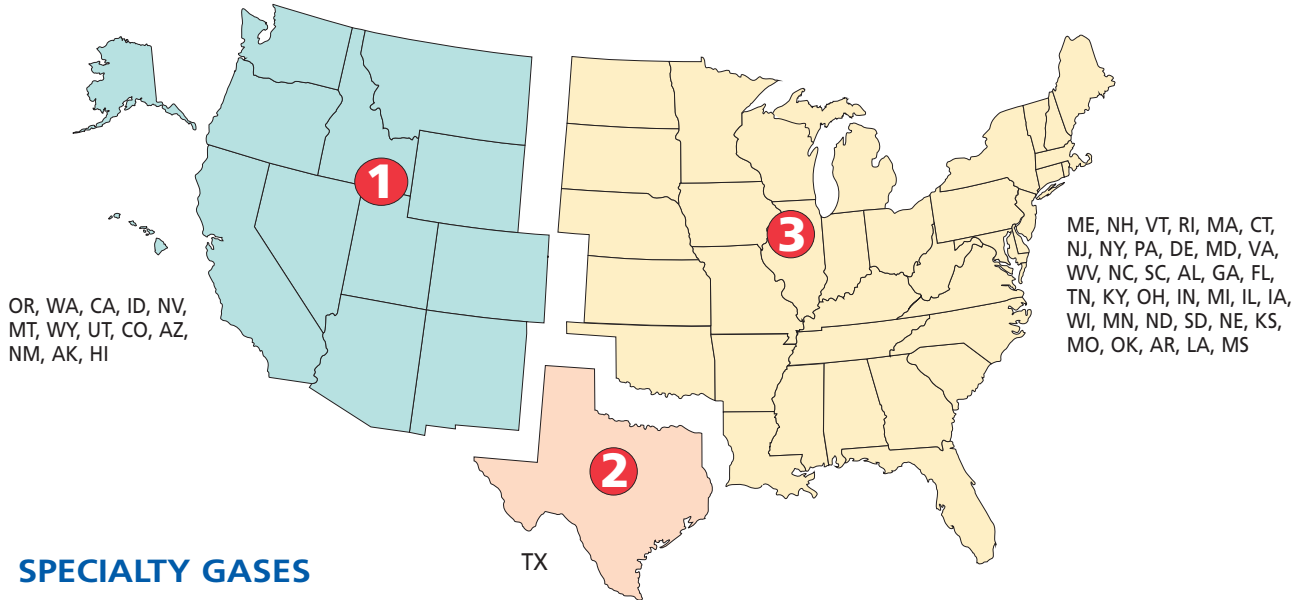
Thank you for your interest in our specialty gas and equipment products and we look forward to the opportunity to welcome you to our new FIRST-MateSM Program. For more information, please visit the Matheson Tri-Gas website @ www.mathesontrigas.com, or call our customer service center @ **800-416-2505** 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

2 3106 Pasadena Freeway
Pasadena, TX 77503
Phone: 713-534-8217
Fax: 713-534-8706
Email: mtgpasadena@matheson-trigas.com

San Antonio and Austin area:
2550 Kyle Crossing
Kyle, TX 78640
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Fax: 512-262-4011
Email: mtgkyle@matheson-trigas.com

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Phone: 800-416-2505
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INTERNATIONAL

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SPECIALTY GAS SYSTEMS AND EQUIPMENT

WORLDWIDE EQUIPMENT TECHNOLOGY CENTER

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Email: 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

GENERAL INQUIRIES

info@matheson-trigas.com

Equipment Technology Center

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