



# "ULSD" Sulfur Standards for Refineries

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

**Matheson Tri-Gas** offers a full range of Ultra Low Sulfur in Diesel (ULSD) Standards designed to facilitate compliance with the requirements stated under 20CFR, mandated by current EPA regulations for low sulfur monitoring in diesel fuels. It has become essential for manufacturers of diesel fuel to incorporate ULSD reference standards as calibration standards to ensure compliance with the required sulfur concentration level in diesel fuels produced.

Matheson ULSD Sulfur Standards are individually prepared and custom made to the specifications requested by each of our customers. Our standards are gravimetrically blended and are NIST traceable by weight, with all reported values verified by one or more analytical methods.

## Quality YOU CAN DEPEND ON....

**Accurate Analytical Results.** *At the end of each day, this is all that matters. Every lot we ship must meet Matheson's accuracy requirements.*

Matheson's ULSD Sulfur Standards are formulated to meet the requirements of both EPA and ASTM methods. We manufacture our standards to the needs of the Analytical Chemist—making certain the quality of each standard allows the chemist to effectively analyze for the required characteristics of each sample, without concern.

Each of our ULSD Sulfur Standard products are manufactured and analyzed according to the following parameters:

- **Guaranteed Accuracy to +/- 2%**
- **Direct Traceability to NIST SRM 2723a & SRM 2770**
- **Laboratory Certification to ASTM D5453 using an Antek Model 9000 Sulfur Analyzer (UV Fluorescence method)**
- **High Resolution Gravimetric Preparation**
- **High Purity Synthetic Diesel Fuel Base**
- **Multiple Sulfur Source Compounds**
- **Available in "Mineral Oil" Base**



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All of the materials used for production are analyzed for levels of purity, and the resulting Sulfur Standards are analyzed in-house for composition using an Antek 9000 Analyzer.

## MULTIPLE SULFUR STANDARD SIZES (VOLUMES) AVAILABLE

Matheson produces and offers the widest range of ULSD Sulfur Standard sizes (volumes) to meet the analytical needs of our customers.

- **Ampoules:** 2-ml, 5-ml, 10-ml & 20-ml
- **Jars:** 100-ml, 250-ml, 500-ml & 1000-ml or 1-liter
- **Cylinders:** AL-LP2.5 (15 lbs) & AL-LP5 (30 lbs)



A combination package of any of the above sizes is available upon request. All standard orders are shipped within 72 hours after the order is received and confirmed.

## ULSD Sulfur Standards (in Diesel Fuel)

Product Listing		Container Size			Total Sulfur Concentration Range (in ppm)																								
ULSD Product Description	Product Code	Ampoule	Bottle	Cylinder	0	1	5	7	10	15	20	25	30	50	75	80	100	150	200	300	400	450	500	600	1000	2500	5000	CD	SND
EPA Qualification Set	GSD11000		6 x 4-oz				•		•	•								•				•							•
Calibration Set	GSD12000		7 x 4-oz		•		•		•	•	•	•	•																
Daily QC Set	GSD13000		4 x 4-oz					•																					
Calibration Set	GSD14000		7 x 4-oz		•												•		•	•	•		•	•					
TIER II Calibration Set	GSD15000		6 x 4-oz		•				•			•		•	•		•												
TIER II Daily QC Set	GSD16000		4 x 4-oz																										
HIGH Sulfur Calibration Set	GSD17000		4 x 4-oz																						•	•	•		
EPA Qualification Set	GSD30000	50 x 20-ml			•		•		•	•	•						•		•	•	•		•						
Standards in 100-ml	GSD20100		100-ml			A	B		C	D	E		F	G	H		J		K	L	M		N						
Standards in 250-ml	GSD20250		250-ml			A	B		C	D	E		F	G	H		J		K	L	M		N						
Standards in 500-ml	GSD20500		500-ml			A	B		C	D	E		F	G	H		J		K	L	M		N						
Standards in 1000-ml	GSD21000		1000-ml			A	B		C	D	E		F	G	H		J		K	L	M		N						
Standards in AL-LP5	GSD4LP50			30 lbs.	A		B		C	D	E	F	G	H	J		K		L	M	N		P	Q	R	S	T	W	X
Standards in AL-LP2.5	GSD4LP25			15 lbs.	A		B		C	D	E	F	G	H	J		K		L	M	N		P	Q	R	S	T	W	X

- Notes:**
- (1) To configure a Product Code for a Bottle or Cylinder order -- simply add the letter of the desired concentration to the base product code; for example: a 100-ml bottle with 5 ppm total sulfur will have a configured product code of "GSD20100B"
  - (2) The "AL-LP" cylinders are filled with a standard 200 psig helium pressure pad
  - (3) CD = Commercial diesel analyzed between 0-500 ppm; SND = Custom blend of total sulfur (in ppm) with nitrogen (in ppm) in a diesel matrix
  - (4) Standards can be furnished in a "Mineral Oil" base upon request
  - (5) Custom requests are welcome if the product(s) are not specified in the table above

## The Matheson Tri-Gas Commitment To SUPPLY CHAIN Excellence Matheson's ULSD Sulfur Standards

### "Quality Assurance Performance GUARANTEE"

If you are not 100% satisfied with the QUALITY of the Sulfur Standards purchased from Matheson Tri-Gas, notify us, and within 48 hours we will ship you a replacement product free of charge (including shipping), AND your next shipment of the same product will also be free of charge. This warranty is valid for six months from the date of shipment of the non-satisfactory product(s). We define "QUALITY" as compliance of our Sulfur Standards with mutually agreed upon specifications for meeting your specific requirements for Sulfur Standards or the specifications associated with our standard product offering.

## We invite you to take Advantage of Matheson's "SUPPLY REWARDS" Program for ULSD Sulfur Standards

Look for a bright yellow label (shown on right) affixed to each container of ULSD Sulfur Standards.

"SUPPLY REWARDS" is an exciting new customer program that allows you to earn points every time you purchase a ULSD Sulfur Standard Product from Matheson Tri-Gas. Each container size will have a SUPPLY REWARDS label corresponding to a specific number of points. Enrolling to receive your points is easy and FREE! Simply visit [www.supplyrewards.com](http://www.supplyrewards.com) and fill out the required information to set-up your account. Then enter the "alpha-numeric code" from the label into the appropriate location! That's all there is to enrolling and getting started!



You can redeem your Supply Rewards points for over 2,000 brand name items. In addition to ULSD Sulfur Standards, you can earn Supply Rewards points when you purchase a wide variety of other Matheson products, including specialty gas and gas handling equipment.

For more information on participating products offered by Matheson Tri-Gas, visit [www.supplyrewards.com](http://www.supplyrewards.com) and click-on the Matheson logo. You can also visit the Matheson Tri-Gas website at [www.matheson-trigas.com](http://www.matheson-trigas.com).

If you have any questions about the **Supply Rewards Program**, consult your local Matheson Sales Representative, or contact a Matheson Customer Service Representative at **(800) 416-2505**.

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