



Cal-MAT™ Daily Standards

Cal-MAT™ Daily Standards mixtures are designed to meet your daily calibration needs when an EPA Protocol mix is not required.

Cal-MAT-2™ is manufactured with a certification accuracy of ±2% of the minor component.

Matheson offers two grades of Cal-MAT™ Daily Standards. Cal-MAT-1™ mixtures are manufactured with a certification accuracy of ±1% relative of the component.

If the mixtures you need are not listed in the table below, please contact Matheson to discuss your needs in detail.

Shipping Information

UN Number:	UN 1956
DOT Proper Shipping Name:	Compressed Gas, nos (List of Components)
DOT Classification:	2.2 (Nonflammable Gas)
DOT Label:	NON-FLAMMABLE GAS
TC Shipping Name:	Compressed Gas, nos (List of Components)
TC Classification:	2.2
TC Label:	NON-FLAMMABLE GAS, NON-POISONOUS GAS

Cylinder Specifications

Cylinder Size	Valve Outlet CGA No.	Pressure		Approximate Ship Weight	
		psig @ 70°F	kPa @ 21.1°C	lb	kg
1R	**	2,000	13,904	69	36
2R	**	2,000	13,904	48	22
3R	**	2,000	13,904	28	13

**See Equipment Recommendations for Valve Outlet CGA Number.

Binary Mixtures	Cal-MAT-1™ Product Code	Cal-MAT-2™ Product Code	Cylinder Size	Content		Equipment Recommendations	Model No.	Page No.
				US	Metric			
Ammonia in Air	N/A	G0833118	1R	145 ft ³	4.11 m ³	Dual Stage Reg.	Series 3810	318
Ammonia	10 ppm-1%	N/A	2R	78 ft ³	2.21 m ³	Single Stage Reg.	Series 3510	312
Air	Balance	N/A	3R	29 ft ³	0.82 m ³	Valve Outlet CGA No. 590		
Ammonia in Nitrogen	N/A	G2659733	1R	143 ft ³	4.05 m ³	Dual Stage Reg.	Series 3810	318
Ammonia	10 ppm-10%	N/A	2R	77 ft ³	2.18 m ³	Single Stage Reg.	Series 3510	312
Nitrogen	Balance	N/A	3R	29 ft ³	0.82 m ³	Valve Outlet CGA No. 705		
Carbon Dioxide in Air	G0823218	G0834318	1R	145 ft ³	4.11 m ³	Dual Stage Reg.	Series 1250	296
Carbon Dioxide	100 ppm-30%	G0823247	2R	78 ft ³	2.21 m ³	Single Stage Reg.	Series 3530	313
Air	Balance	G0823259	3R	29 ft ³	0.82 m ³	Valve Outlet CGA No. 590		
Carbon Dioxide in Nitrogen	G0823418	G0834518	1R	143 ft ³	4.05 m ³	Dual Stage Reg.	Series 1250	296
Carbon Dioxide	100 ppm-30%	G0823447	2R	77 ft ³	2.18 m ³	Single Stage Reg.	Series 3530	313
Nitrogen	Balance	G0823459	3R	29 ft ³	0.82 m ³	Valve Outlet CGA No. 580		
Carbon Monoxide in Air	G0823618	G0834718	1R	145 ft ³	4.11 m ³	Dual Stage Reg.	Series 3120	299
Carbon Monoxide	1 ppm -1%	G0823647	2R	78 ft ³	2.21 m ³	Single Stage Reg.	Series 3530	313
Air	Balance	G0823659	3R	29 ft ³	0.82 m ³	Valve Outlet CGA No. 590		
Carbon Monoxide in Nitrogen	G0823818	G0834918	1R	143 ft ³	4.05 m ³	Dual Stage Reg.	Series 3120	299
Carbon Monoxide	1 ppm-1%	G0823847	2R	77 ft ³	2.21 m ³	Single Stage Reg.	Series 3530	313
Nitrogen	Balance	G0823859	3R	29 ft ³	0.82 m ³	Valve Outlet CGA No. 350		
Hydrogen Chloride in Nitrogen	N/A	G0839723	1Q	213 ft ³	6.05 m ³	Dual Stage Reg.	Series 3810	318
Hydrogen Chloride	10 ppm-5%	N/A	3Q	35 ft ³	0.99 m ³	Single Stage Reg.	Series 3610A	316
Nitrogen	Balance	G0839755				Valve Outlet CGA No. 590		
Hydrogen Sulfide in Air	G2659736	G2659739	1I	145 ft ³	4.11 m ³	Dual Stage Reg.	Series 3810	318
Hydrogen Sulfide	2 ppm-0.1%	G2659737	2I	78 ft ³	2.21 m ³	Single Stage Reg.	Series 3610A	316
Air	Balance	G2659738	3I	29 ft ³	0.82 m ³	Valve Outlet CGA No. 660		
Hydrogen Sulfide in Nitrogen	G0825818	G0836918	1I	143 ft ³	4.05 m ³	Dual Stage Reg.	Series 3810	318
Hydrogen Sulfide	1 ppm-0.1%	G0825847	2I	77 ft ³	2.18 m ³	Single Stage Reg.	Series 3610A	316
Nitrogen	Balance	G0825859	3I	29 ft ³	0.82 m ³	Valve Outlet CGA No. 330		
Methane in Air	G0824018	G0835118	1R	145 ft ³	4.11 m ³	Dual Stage Reg.	Series 3120	299
Methane	1 ppm-0.1%	G0824047	2R	78 ft ³	2.21 m ³	Single Stage Reg.	Series 3530	313
Air	Balance	G0824059	3R	29 ft ³	0.82 m ³	Valve Outlet CGA No. 590		
Nitric Oxide in Nitrogen	G0826018	G0839918	1R	143 ft ³	4.05 m ³	Dual Stage Reg.	Series 3810	318
Nitric Oxide	≥10 ppm	G0826047	2R	77 ft ³	2.18 m ³	Single Stage Reg.	Series 3510	312
Nitrogen	Balance	G0826059	3R	29 ft ³	0.82 m ³	Valve Outlet CGA No. 660		
	2.0 - 9.9 ppm	G2659674	1R	143 ft ³	4.05 m ³			
		G2659675	2R	77 ft ³	2.18 m ³			
	1.0 - 1.9 ppm	N/A	1R	143 ft ³	4.05 m ³			
		N/A	2R	77 ft ³	2.18 m ³			
Nitrogen Dioxide in Air	N/A	G0837518	1R	145 ft ³	4.11 m ³	Dual Stage Reg.	Series 3810	318
Nitrogen Dioxide	20 ppm-500 ppm	N/A	2R	78 ft ³	2.21 m ³	Single Stage Reg.	Series 3510	312
Air	Balance	N/A	3R	29 ft ³	0.82 m ³	Valve Outlet CGA No. 660		
Nitrogen Dioxide in Nitrogen	N/A	G2659731	1R	143 ft ³	4.05 m ³	Dual Stage Reg.	Series 3810	318
Nitrogen Dioxide	20 ppm-100 ppm	N/A	2R	77 ft ³	2.18 m ³	Single Stage Reg.	Series 3510	312
Nitrogen	Balance	N/A	3R	29 ft ³	0.82 m ³	Valve Outlet CGA No. 660		



Gas Mixtures – Products for Specialty Gas Applications

Environmental Compliance Standards

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Cal-MAT™ Daily Standards (continued)

Binary Mixtures		Cal-MAT-1™ Product Code	Cal-MAT-2™ Product Code	Cylinder Size	Content		Equipment Recommendations	Model No.	Page No.
					US	Metric			
Oxygen in Nitrogen		G0826818	G0837718	1R	143 ft ³	4.05 m ³	Dual Stage Reg.	Series 3120	299
Oxygen	0.5-49%	G0826847	G0837747	2R	77 ft ³	2.18 m ³	Single Stage Reg.	Series 3530	313
Nitrogen	Balance	G0826859	G0837759	3R	29 ft ³	0.82 m ³	Valve Outlet CGA No. ***		
Propane in Air		G0822218	G0833318	1R	145 ft ³	4.11 m ³	Dual Stage Reg.	Series 3120	299
Propane	1 ppm-1.3%	G0822247	G0833347	2R	78 ft ³	2.21 m ³	Single Stage Reg.	Series 3530	313
Air	Balance	G0822259	G0833359	3R	29 ft ³	0.82 m ³	Valve Outlet CGA No. 590		
Propane in Nitrogen		G0822418	G0833518	1R	143 ft ³	4.05 m ³	Dual Stage Reg.	Series 3120	299
Propane	1 ppm-3%	G0822447	G0833547	2R	77 ft ³	2.18 m ³	Single Stage Reg.	Series 3530	313
Nitrogen	Balance	G0822459	G0833559	3R	29 ft ³	0.82 m ³	Valve Outlet CGA No. 350		
Sulfur Dioxide in Air		G0827018	G0837918	1R	145 ft ³	4.11 m ³	Dual Stage Reg.	Series 3810	318
Sulfur Dioxide	5 ppm-1%	G0827047	G0837947	2R	78 ft ³	2.21 m ³	Single Stage Reg.	Series 3510	312
Air	Balance	G0827059	G0837959	3R	29 ft ³	0.82 m ³	Valve Outlet CGA No. 660		
Sulfur Dioxide in Nitrogen		G0827218	G0838118	1R	143 ft ³	4.05 m ³	Dual Stage Reg.	Series 3810	318
Sulfur Dioxide	5 ppm-1%	G0827247	G0838147	2R	77 ft ³	2.18 m ³	Single Stage Reg.	Series 3510	312
Nitrogen	Balance	G0827259	G0838159	3R	29 ft ³	0.82 m ³	Valve Outlet CGA No. 660		

*** Valve Outlet CGA Number is CGA 580 for concentration of Oxygen ≤ 5%, CGA 590 for concentration of Oxygen > 5% but ≤ 23%, and CGA 296 for concentration of Oxygen > 23%.

Note:

1. Some mixes may not be available due to critical mix limitations and safety considerations.
2. Please contact Matheson if your specific mix requirements are not listed.

⚠ 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.

⚠ 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.

Multicomponent Mixtures		Cal-MAT-1™ Product Code	Cal-MAT-2™ Product Code	Cylinder Size	Content		Equipment Recommendations	Model No.	Page No.
					US	Metric			
Carbon Dioxide, Oxygen in Nitrogen		G0825618	G0836718	1R	143 ft ³	4.05 m ³	Dual Stage Reg.	Series 3120	299
Carbon Dioxide	400 ppm-30%	G0825647	G0836747	2R	77 ft ³	2.18 m ³	Single-Stage Reg.	Series 3530	313
Oxygen	0.1%-50%	G0825659	G0836759	3R	29 ft ³	0.82 m ³	Valve Outlet CGA No. ***		
Nitrogen	Balance								
Carbon Monoxide, Oxygen in Nitrogen		G0825418	G0836518	1R	143 ft ³	4.05 m ³	Dual Stage Reg.	Series 3120	299
Carbon Monoxide	10 ppm-1%	G0825247	G0836547	2R	77 ft ³	2.18 m ³	Single Stage Reg.	Series 3530	313
Oxygen	0.1%-50%	G0825459	G0836559	3R	29 ft ³	0.82 m ³	Valve Outlet CGA No. ***		
Nitrogen	Balance								
Carbon Monoxide, Carbon Dioxide in Nitrogen		G0824418	G0835518	1R	143 ft ³	4.05 m ³	Dual Stage Reg.	Series 3120	299
Carbon Monoxide	10 ppm-1%	G0824447	G0835547	2R	77 ft ³	2.18 m ³	Single-Stage Reg.	Series 3530	313
Carbon Dioxide	400 ppm-30%	G0824459	G0835559	3R	29 ft ³	0.82 m ³	Valve Outlet CGA No. 350		
Nitrogen	Balance								
Carbon Monoxide, Carbon Dioxide Oxygen in Nitrogen		G0825018	G0836118	1R	143 ft ³	4.05 m ³	Dual Stage Reg.	Series 3120	299
Carbon Monoxide	10 ppm-1%	G0825047	G0836147	2R	77 ft ³	2.18 m ³	Single Stage Reg.	Series 3530	313
Carbon Dioxide	400 ppm-30%	G0825059	G0836159	3R	29 ft ³	0.82 m ³	Valve Outlet CGA No. ***		
Oxygen	0.2%-23%								
Nitrogen	Balance								
Methane, Oxygen in Nitrogen		G0824218	G0835318	1R	143 ft ³	4.05 m ³	Dual Stage Reg.	Series 3120	299
Methane	1 ppm-999 ppm	G0824247	G0835347	2R	77 ft ³	2.18 m ³	Single-Stage Reg.	Series 3530	313
Oxygen	0.1%-23%	G0824259	G0835359	3R	29 ft ³	0.82 m ³	Valve Outlet CGA No. ***		
Nitrogen	Balance								
Nitric Oxide, Carbon Dioxide in Nitrogen		G0826418	G0837318	1R	143 ft ³	4.05 m ³	Dual Stage Reg.	Series 3810	318
Nitric Oxide	20 ppm-5000 ppm	G0826447	G0837347	2R	77 ft ³	2.18 m ³	Single-Stage Reg.	Series 3510	312
Carbon Dioxide	400 ppm-20%	G0826459	G0837359	3R	29 ft ³	0.82 m ³	Valve Outlet CGA No. 660		
Nitrogen	Balance								
Nitric Oxide, Carbon Monoxide, Carbon Dioxide in Nitrogen		G0824818	G0835918	1R	143 ft ³	4.05 m ³	Dual Stage Reg.	Series 3810	318
Nitric Oxide	20 ppm-5000 ppm	G0824847	G0835947	2R	77 ft ³	2.18 m ³	Single Stage Reg.	Series 3510	312
Carbon Monoxide	10 ppm-1%	G0824859	G0835959	3R	29 ft ³	0.82 m ³	Valve Outlet CGA No. 660		
Carbon Dioxide	400 ppm-20%								
Nitrogen	Balance								



Cal-MAT™ Daily Standards (continued)

Multicomponent Mixtures	Cal-MAT-1™ Product Code	Cal-MAT-2™ Product Code	Cylinder Size	Content US	Content Metric	Equipment Recommendations	Model No.	Page No.
Nitric Oxide, Sulfur Dioxide, in Nitrogen	G0828218	G0839118	1R	143 ft ³	4.05 m ³	Dual Stage Reg. Single Stage Reg. Valve Outlet CGA No. 660	Series 3810 Series 3510	318 312
Nitric Oxide 20 ppm-5000 ppm	G0828247	G0839147	2R	77 ft ³	2.18 m ³			
Sulfur Dioxide 20 ppm-5000 ppm	G0828259	G0839159	3R	29 ft ³	0.82 m ³			
Nitrogen Balance								
Nitric Oxide, Sulfur Dioxide, Carbon Dioxide in Nitrogen	G0827818	G0838718	1R	143 ft ³	4.05 m ³	Dual Stage Reg. Single Stage Reg. Valve Outlet CGA No. 660	Series 3810 Series 3510	318 312
Nitric Oxide 20 ppm-5000 ppm	G0827847	G0838747	2R	77 ft ³	2.18 m ³			
Sulfur Dioxide 20 ppm-5000 ppm	G0827859	G0838759	3R	29 ft ³	0.82 m ³			
Carbon Dioxide 400 ppm-30% Nitrogen Balance								
Nitric Oxide, Sulfur Dioxide, Carbon Monoxide in Nitrogen	G0828418	G0839318	1R	143 ft ³	4.05 m ³	Dual Stage Reg. Single Stage Reg. Valve Outlet CGA No. 660	Series 3810 Series 3510	318 312
Nitric Oxide 20 ppm-5000 ppm	G0828447	G0839347	2R	77 ft ³	2.18 m ³			
Sulfur Dioxide 20 ppm-5000 ppm	G0828459	G0839359	3R	29 ft ³	0.82 m ³			
Carbon Monoxide 20 ppm-1% Nitrogen Balance								
Propane, Carbon Dioxide, Oxygen in Nitrogen	G0823018	G0834118	1R	143 ft ³	4.05 m ³	Dual Stage Reg. Single Stage Reg. Valve Outlet CGA No. ***	Series 3120 Series 3530	299 313
Propane 1 ppm-1.23%	G0823047	G0834147	2R	77 ft ³	2.18 m ³			
Carbon Dioxide 400 ppm-30%	G0823059	G0834159	3R	29 ft ³	0.82 m ³			
Oxygen 0.2%-23% Nitrogen Balance								
Propane, Carbon Monoxide in Air	G0822618	G0833718	1R	145 ft ³	4.11 m ³	Dual Stage Reg. Single Stage Reg. Valve Outlet CGA No. 590	Series 3120 Series 3530	299 313
Propane 1 ppm-1.23%	G0822647	G0833747	2R	77 ft ³	2.21 m ³			
Carbon Monoxide 10 ppm-1%	G0822659	G0833759	3R	29 ft ³	0.82 m ³			
Air Balance								
Propane, Carbon Monoxide, Oxygen in Nitrogen	G0822818	G0839118	1R	143 ft ³	4.05 m ³	Dual Stage Reg. Single Stage Reg. Valve Outlet CGA No. ***	Series 3120 Series 3530	299 313
Propane 1 ppm-1.23%	G0822847	G0839147	2R	77 ft ³	2.18 m ³			
Carbon Monoxide 10 ppm-1%	G0822859	G0839159	3R	29 ft ³	0.82 m ³			
Oxygen 0.23%-50% Nitrogen Balance								
Propane, Carbon Monoxide, Carbon Dioxide in Nitrogen	G0824618	G0835718	1R	143 ft ³	4.05 m ³	Dual Stage Reg. Single Stage Reg. Valve Outlet CGA No. 350	Series 3120 Series 3530	299 313
Propane 1 ppm-3%	G0824647	G0835747	2R	77 ft ³	2.18 m ³			
Carbon Monoxide 10 ppm-1%	G0824659	G0835759	3R	29 ft ³	0.82 m ³			
Carbon Dioxide 400 ppm-30% Nitrogen Balance								
Sulfur Dioxide, Oxygen in Nitrogen	G0828618	G0839518	1R	143 ft ³	4.05 m ³	Dual Stage Reg. Single-Stage Reg. Valve Outlet CGA No. 660	Series 3810 Series 3510	318 312
Sulfur Dioxide 20 ppm-1%	G0828647	G0839547	2R	77 ft ³	2.18 m ³			
Oxygen 0.1%-23%	G0828659	G0839559	3R	29 ft ³	0.82 m ³			
Nitrogen Balance								
Sulfur Dioxide, Carbon Dioxide in Nitrogen	G0827418	G0838318	1R	143 ft ³	4.05 m ³	Dual Stage Reg. Single-Stage Reg. Valve Outlet CGA No. 660	Series 3810 Series 3510	318 312
Sulfur Dioxide 20 ppm-1%	G0827447	G0838347	2R	77 ft ³	2.18 m ³			
Carbon Dioxide 400 ppm-30%	G0827459	G0838359	3R	29 ft ³	0.82 m ³			
Nitrogen Balance								
Sulfur Dioxide, Carbon Dioxide, Carbon Monoxide in Nitrogen	G0827618	G0838518	1R	143 ft ³	4.05 m ³	Dual Stage Reg. Single Stage Reg. Valve Outlet CGA No. 660	Series 3810 Series 3510	318 312
Sulfur Dioxide 20 ppm-5000 ppm	G0827647	G0838547	2R	77 ft ³	2.18 m ³			
Carbon Dioxide 400 ppm-30%	G0827659	G0838559	3R	29 ft ³	0.82 m ³			
Carbon Monoxide 20 ppm-5000 ppm Nitrogen Balance								
Sulfur Dioxide, Carbon Dioxide, Oxygen in Nitrogen	G0828018	G0838918	1R	143 ft ³	4.05 m ³	Dual Stage Reg. Single Stage Reg. Valve Outlet CGA No. ***	Series 3810 Series 3510	318 312
Sulfur Dioxide 20 ppm-5000 ppm	G0828047	G0838947	2R	77 ft ³	2.18 m ³			
Carbon Dioxide 400 ppm-30%	G0828059	G0838959	3R	29 ft ³	0.82 m ³			
Oxygen 0.2%-23% Nitrogen Balance								

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Note:

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Cal-MAT™ Daily Standards *(continued)*

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