



## EPA Protocol Mixtures

All of the following mixtures are certified using EPA Protocol G1 Procedure: No dilution.

If you require an EPA Protocol concentration beyond direct analysis limits to NIST SRM, Matheson has quantitative capability to provide EPA Protocol G2 mixtures: using dilution. Please inquire.

### 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 psig @ 70°F	Pressure kPa @ 21.1°C	Approximate Ship Weight	
				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	Product Code	Cylinder Size	Content		EPA Protocol Concentrations	Shelf Life Months	Equipment Recommendations	Model No.	Page No.
			US	Metric					
<b>Carbon Dioxide in Air</b>	G0840218	1R	145 ft <sup>3</sup>	4.11 m <sup>3</sup>	≥ 400 ppm	36	Dual Stage Reg. Single Stage Reg. Valve Outlet CGA No. 590	Series 3120 Series 3530	299 313
	G0840247	2R	78 ft <sup>3</sup>	2.21 m <sup>3</sup>					
	G0840259	3R	29 ft <sup>3</sup>	0.82 m <sup>3</sup>					
<b>Carbon Dioxide in Nitrogen</b>	G0840418	1R	143 ft <sup>3</sup>	4.05 m <sup>3</sup>	≥ 400 ppm	36	Dual Stage Reg. Single Stage Reg. Valve Outlet CGA No. 580	Series 3120 Series 3530	299 313
	G0840447	2R	77 ft <sup>3</sup>	2.18 m <sup>3</sup>					
	G0840459	3R	29 ft <sup>3</sup>	0.82 m <sup>3</sup>					
<b>Carbon Monoxide in Air</b>	G0840618	1R	145 ft <sup>3</sup>	4.11 m <sup>3</sup>	2 - < 8 ppm	6	Dual Stage Reg. Single Stage Reg. Valve Outlet CGA No. 590	Series 3120 Series 3530	299 313
	G0840647	2R	78 ft <sup>3</sup>	2.21 m <sup>3</sup>	≥ 8 ppm	36			
	G0840659	3R	29 ft <sup>3</sup>	0.82 m <sup>3</sup>					
<b>Carbon Monoxide in Nitrogen</b>	G0840818	1R	143 ft <sup>3</sup>	4.05 m <sup>3</sup>	2 - < 8 ppm	6	Dual Stage Reg. Single Stage Reg. Valve Outlet CGA No. 350	Series 3120 Series 3530	299 313
	G0840847	2R	77 ft <sup>3</sup>	2.18 m <sup>3</sup>	≥ 8 ppm	36			
	G0840859	3R	29 ft <sup>3</sup>	0.82 m <sup>3</sup>					
<b>Hydrogen Sulfide in Air</b>	G0841018	1I	145 ft <sup>3</sup>	4.11 m <sup>3</sup>	2 - < 4 ppm	6	Dual Stage Reg. Single Stage Reg. Valve Outlet CGA No. 660	Series 3810 Series 3610A	318 316
	G0841047	2I	78 ft <sup>3</sup>	2.21 m <sup>3</sup>	≥ 4 ppm	6			
	G0841059	3I	29 ft <sup>3</sup>	0.82 m <sup>3</sup>					
<b>Hydrogen Sulfide in Nitrogen</b>	G0841218	1I	143 ft <sup>3</sup>	4.05 m <sup>3</sup>	2 - < 4 ppm	6	Dual Stage Reg. Single Stage Reg. Valve Outlet CGA No. 330	Series 3810 Series 3610A	318 316
	G0841247	2I	77 ft <sup>3</sup>	2.18 m <sup>3</sup>	≥ 4 ppm	12			
	G0841259	3I	29 ft <sup>3</sup>	0.82 m <sup>3</sup>					
<b>Methane in Air</b>	G0841418	1R	145 ft <sup>3</sup>	4.11 m <sup>3</sup>	< 1 ppm	6	Dual Stage Reg. Single Stage Reg. Valve Outlet CGA No. 590	Series 3120 Series 3530	299 313
	G0841447	2R	78 ft <sup>3</sup>	2.21 m <sup>3</sup>	≥ 1 ppm	36			
	G0841459	3R	29 ft <sup>3</sup>	0.82 m <sup>3</sup>					
<b>Nitric Oxide in Nitrogen</b> ≥ 10 ppm	G0841618	1R	143 ft <sup>3</sup>	4.05 m <sup>3</sup>	1 - < 4 ppm ≥ 4 ppm	6 24	Dual Stage Reg. Single Stage Reg. Valve Outlet CGA No. 660	Series 3810 Series 3510	318 312
	G0841647	2R	77 ft <sup>3</sup>	2.18 m <sup>3</sup>					
	G0841659	3R	29 ft <sup>3</sup>	0.82 m <sup>3</sup>					
<b>Nitric Oxide in Nitrogen</b> 2.5 - 9.9 ppm 2.5 - 9.9 ppm 1.0 - 2.4 ppm (2% Cert.) 1.0 - 2.4 ppm (2% Cert.)	G2659672	1R	143 ft <sup>3</sup>	4.05 m <sup>3</sup>					
	G2659673	2R	77 ft <sup>3</sup>	2.18 m <sup>3</sup>					
	G2659670	1R	143 ft <sup>3</sup>	4.05 m <sup>3</sup>					
	G2659671	2R	77 ft <sup>3</sup>	2.18 m <sup>3</sup>					
<b>Nitrogen Dioxide in Air</b> (2% Certification)	G0841818	1R	145 ft <sup>3</sup>	4.11 m <sup>3</sup>	20 - < 80 ppm	6	Dual Stage Reg. Single Stage Reg. Valve Outlet CGA No. 660	Series 3810 Series 3510	318 312
	G0841847	2R	78 ft <sup>3</sup>	2.21 m <sup>3</sup>	≥ 80 ppm	24			



**EPA Protocol Mixtures** *(continued)*

Binary Mixtures	Product Code	Cylinder Size	Content		EPA Protocol	Concentrations	Equipment Recommendations	Model No.	Page No.
			US	Metric		Shelf Life Months			
<b>Oxygen in Nitrogen</b>	G0842018	1R	143 ft <sup>3</sup>	4.05 m <sup>3</sup>	0.3 % - < 0.8 %	6	Dual Stage Reg.	Series 3120	299
	G0842047	2R	77 ft <sup>3</sup>	2.18 m <sup>3</sup>		≥ 0.8 %	36	Single Stage Reg.	Series 3530
	G0842059	3R	29 ft <sup>3</sup>	0.82 m <sup>3</sup>			Valve Outlet CGA No. ***		
<b>Propane in Air</b>	G0842218	1R	145 ft <sup>3</sup>	4.11 m <sup>3</sup>	< 1 ppm	6	Dual Stage Reg.	Series 3120	299
	G0842247	2R	78 ft <sup>3</sup>	2.21 m <sup>3</sup>		≥ 1 ppm	36	Single Stage Reg.	Series 3530
	G0842259	3R	29 ft <sup>3</sup>	0.82 m <sup>3</sup>			Valve Outlet CGA No. 590		
<b>Propane in Nitrogen</b>	G0842418	1R	143 ft <sup>3</sup>	4.05 m <sup>3</sup>	< 1 ppm	6	Dual Stage Reg.	Series 3120	299
	G0842447	2R	77 ft <sup>3</sup>	2.18 m <sup>3</sup>		≥ 1 ppm	36	Single Stage Reg.	Series 3530
	G0842459	3R	29 ft <sup>3</sup>	0.82 m <sup>3</sup>			Valve Outlet CGA No. 350		
<b>Sulfur Dioxide in Air</b>	G0849018	1R	145 ft <sup>3</sup>	4.11 m <sup>3</sup>	10 - 39 ppm	6	Dual Stage Reg.	Series 3810	318
	G0849047	2R	78 ft <sup>3</sup>	2.21 m <sup>3</sup>	40 to 499 ppm	24	Single Stage Reg.	Series 3510	312
	G0849059	3R	29 ft <sup>3</sup>	0.82 m <sup>3</sup>	≥ 500 ppm	36	Valve Outlet CGA No. 660		
<b>Sulfur Dioxide in Nitrogen</b>	G0842618	1R	143 ft <sup>3</sup>	4.05 m <sup>3</sup>	10 - 39 ppm	6	Dual Stage Reg.	Series 3810	318
	G0842647	2R	77 ft <sup>3</sup>	2.18 m <sup>3</sup>	40 to 499 ppm	24	SingStage Reg.	Series 3510	312
	G0842659	3R	29 ft <sup>3</sup>	0.82 m <sup>3</sup>	≥500 ppm	36	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%.