Gas Mixtures – Products for Specialty Gas Applications Environmental Compliance Standards



EPA Protocol Mixtures (continued)

Multicomponent Mixtures		Product Code	Cylinder Size	Co US	ntent Metric	Equipment Recommendations	Model No.
Carbon Dioxide,		G0844018	1R	143 ft³	4.05 m ³	Dual Stage Reg.	Series 3120
Oxygen in Nitrogen		G0844047	2R	77 ft³	2.18 m ³	Single Stage Reg.	Series 3530
Carbon Dioxide ≥	400 ppm	G0844059	3R	29 ft³	0.82 m ³	Valve Outlet CGA No.***	
Oxygen ≥	0.8 %						
EPA Certification: 36 months							
Carbon Monoxide,		G0844218	1R	143 ft³	4.05 m ³	Dual Stage Reg.	Series 3120
Oxygen in Nitrogen		G0844247	2R	77 ft ³	2.18 m ³	Single Stage Reg.	Series 3530
Carbon Monoxide ≥	8 ppm	G0844259	3R	29 ft ³	0.82 m ³	Valve Outlet CGA No.***	0011000000
Oxygen ≥	0.8 %	00011207	510	2, 10	0.02 111	vario danoi dell'illo	
EPA Certification: 36 months							
Carbon Monoxide,		G0843818	1R	143 ft³	4.05 m ³	Dual Stage Deg	Series 3120
Carbon Dioxide in Nitrog	on	G0843847	2R	77 ft ³	2.18 m ³	Dual Stage Reg. Single Stage Reg.	Series 3530
Carbon Monoxide ≥	8 ppm	G0843859	3R	29 ft ³	0.82 m ³	Valve Outlet CGA No. 350	361168 3330
Carbon Dioxide ≥	400 ppm	G0043033	JK	29 11	0.62 111	valve Outlet CGA No. 550	
EPA Certification: 36 months	400 ppm						
Carbon Monoxide, Carbo	n Dioxide,	G0845318	1R	143 ft³	4.05 m ³	Dual Stage Reg.	Series 3120
Oxygen in Nitrogen	0	G0845347	2R	77 ft ³	2.18 m ³	Single Stage Reg.	Series 3530
Carbon Monoxide ≥	8 ppm	G0845359	3R	29 ft ³	0.82 m ³	Valve Outlet CGA No.***	
Carbon Dioxide ≥	400 ppm						
Oxygen ≥	0.8 %						
EPA Certification: 36 months							
Methane, Oxygen in Nitr		G0843018	1R	143 ft ³	4.05 m ³	Dual Stage Reg.	Series 3120
Methane ≥	1 ppm	G0843047	2R	77 ft³	2.18 m ³	Singl Stage Reg.	Series 3530
Oxygen ≥	0.8 %	G0843059	3R	29 ft³	0.82 m ³	Valve Outlet CGA No.***	
EPA Certification: 36 months							
Nitric Oxide,		G0843618	1R	143 ft³	4.05 m ³	Dual Stage Reg.	Series 3810
Carbon Dioxide in Nitrog	en	G0843647	2R	77 ft³	2.18 m ³	Single Stage Reg.	Series 3510
Nitric Oxide ≥	10 ppm	G0843659	3R	29 ft ³	0.82 m ³	Valve Outlet CGA No. 660	
Carbon Dioxide ≥	400 ppm						
EPA Certification: 24 months	11						
Nitric Oxide,		G0843418	1R	143 ft ³	4.05 m ³	Dual Stage Reg.	Series 3810
Carbon Monoxide in Nitro	ogen	G0843447	2R	77 ft ³	2.18 m ³	Single Stage Reg.	Series 3510
Nitric Oxide ≥	4 ppm	G0843459	3R	29 ft ³	0.82 m ³	Valve Outlet CGA No. 660	001100 3310
Carbon Monoxide ≥	8 ppm	G0013137	310	2710	0.02 111	varve outlet outline.	
EPA Certification: 24 months; if		is less than the a	hove, shelf life is	six (6) months			
						D1 C+ D	Series 3810
Nitric Oxide, Carbon Mon		G0845718	1R	143 ft ³	4.05 m ³	Dual Stage Reg. Single Stage Reg.	
Carbon Dioxide in Nitrog Nitric Oxide ≥		G0845747 G0845759	2R 3R	77 ft ³ 29 ft ³	2.18 m ³ 0.82 m ³	Valve Outlet CGA No. 660	Series 3510
Nitric Oxide ≥ Carbon Monoxide ≥	10 ppm	G0043739	ЭK	29 11	0.62 111	valve Outlet CGA No. 660	
Carbon Dioxide ≥	20 ppm 400 ppm						
EPA Certification: 24 months	400 ppm						
		06****				D. 10	0 1
Nitric Oxide,		G0844418	1R	143 ft³	4.05 m ³	Dual Stage Reg.	Series 3810
Sulfur Dioxide in Nitroge		G0844447	2R	77 ft³	2.18 m ³	Single Stage Reg.	Series 3610A
Nitric Oxide ≥	10 ppm	G0844459	3R	29 ft ³	0.82 m ³	Valve Outlet CGA No. 660	
Sulfur Dioxide ≥	40 ppm						
EPA Certification: 24 months							
Nitric Oxide, Sulfur Dioxi		G0845418	1R	143 ft³	4.05 m ³	Dual Stage Reg.	Series 3810
Carbon Dioxide in Nitrog		G0845447	2R	77 ft³	2.18 m ³	Single Stage Reg.	Series 3510
Nitric Oxide ≥	10 ppm	G0845459	3R	29 ft³	0.82 m ³	Valve Outlet CGA No. 660	
Sulfur Dioxide ≥	40 ppm			-			
Carbon Dioxide ≥	400 ppm						
EPA Certification: 24 month							
Nitric Oxide, Sulfur Dioxi	de.	G0845618	1R	143 ft³	4.05 m ³	Dual Stage Reg.	Series 3810
Carbon Monoxide in Nitro		G0845647	2R	77 ft ³	2.18 m ³	Single Stage Reg.	Series 3510
	10 ppm	G0845659	3R	29 ft ³	0.82 m ³	Valve Outlet CGA No. 660	Series 3310
Nitric Oxide >		22210007		-/			
Nitric Oxide ≥ Sulfur Dioxide ≥							
Sulfur Dioxide ≥ Carbon Monoxide ≥	40 ppm 20 ppm						



Gas Mixtures - Products for Specialty Gas Applications

Environmental Compliance Standards

EPA Protocol Mixtures (continued)

Multicomponent Mixtures		Product Code	Cylinder Size	Co US	ntent Metric	Equipment Recommendations	Model No.
Propane, Carbon Dioxide Oxygen in Nitrogen Propane ≥ Carbon Dioxide ≥ Oxygen ≥ EPA Certification: 36 months	8 ppm 400 ppm 0.8 %	G0845218 G0845247 G0845259	1R 2R 3R	143 ft ³ 77 ft ³ 29 ft ³	4.05 m ³ 2.18 m ³ 0.82 m ³	Dual Stage Reg. Single Stage Reg. Valve Outlet CGA No.***	Series 3120 Series 3530
Propane, Carbon Monox Propane ≥ Carbon Monoxide ≥ EPA Certification: 36 months	ide in Air 1 ppm 8 ppm	G0843118 G0843147 G0843159	1R 2R 3R	145 ft ³ 78 ft ³ 29 ft ³	4.11 m ³ 2.21 m ³ 0.82 m ³	Dual Stage Reg. Single Stage Reg. Valve Outlet CGA No. 590	Series 3120 Series 3530
Propane, Carbon Monox Oxygen in Nitrogen Propane ≥ Carbon Monoxide ≥ Oxygen EPA Certification: 36 months	1 ppm 8 ppm 0.8 %	G0845018 G0845047 G0845059	1R 2R 3R	143 ft ³ 77 ft ³ 29 ft ³	4.05 m ³ 2.18 m ³ 0.82 m ³	Dual Stage Reg. Single Stage Reg. Valve Outlet CGA No.***	Series 3120 Series 3530
Propane, Carbon Monox Carbon Dioxide in Nitrog Propane ≥ Carbon Monoxide ≥ Carbon Dioxide ≥ EPA Certification: 36 month		G0845518 G0845547 G0845559	1R 2R 3R	143 ft³ 77 ft³ 29 ft³	4.05 m ³ 2.18 m ³ 0.82 m ³	Dual Stage Reg. Single Stage Reg. Valve Outlet CGA No. 350	Series 3120 Series 3530
Sulfur Dioxide, Oxygen in Nitrogen Sulfur Dioxide Oxygen ≥ EPA Certification: 24 months	40 to 499 ppm 0.8 %	G0843518 G0843547 G0843559	1R 2R 3R	143 ft ³ 77 ft ³ 29 ft ³	4.05 m ³ 2.18 m ³ 0.82 m ³	Dual Stage Reg. Single Stage Reg. Valve Outlet CGA No.***	Series 3810 Series 3510
Sulfur Dioxide ≥ Oxygen ≥ EPA Certification: 36 months	500 ppm 0.8 %						
Sulfur Dioxide, Carbon Dioxide in Nitrog Sulfur Dioxide Carbon Dioxide ≥ EPA Certification: 24 months	gen 40 to 499 ppm 400 ppm	G0843718 G0843747 G0843759	1R 2R 3R	143 ft ³ 77 ft ³ 29 ft ³	4.05 m ³ 2.18 m ³ 0.82 m ³	Dual Stage Reg. Single Stage Reg. Valve Outlet CGA No. 660	Series 3810 Series 3510
Sulfur Dioxide ≥ Carbon Dioxide ≥ EPA Certification: 36 months	500 ppm 400 ppm						
Sulfur Dioxide, Carbon D Carbon Monoxide in Nitu Sulfur Dioxide Carbon Dioxide ≥ Carbon Monoxide ≥ EPA Certification: 24 month	rogen 40 to 499 ppm	G0845818 G0845847 G0845859	1R 2R 3R	143 ft ³ 77 ft ³ 29 ft ³	4.05 m ³ 2.18 m ³ 0.82 m ³	Dual Stage Reg. Single Stage Reg. Valve Outlet CGA No. 660	Series 3810 Series 3510
Sulfur Dioxide, Carbon D Oxygen in Nitrogen Sulfur Dioxide Carbon Dioxide Oxygen ≥ EPA Certification: 24 months Sulfur Dioxide Carbon Dioxide ≥ Carbon Dioxide ≥ EPA Certification: 36 months	40 to 499 ppm 400 ppm 0.8 % 500 ppm 400 ppm 0.8 %	G0845118 G0845147 G0845159	1R 2R 3R	143 ft ³ 77 ft ³ 29 ft ³	4.05 m ³ 2.18 m ³ 0.82 m ³	Dual Stage Reg. Single Stage Reg. Valve Outlet CGA No.***	Series 3810 Series 3510

^{***} 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. Mixes that do not meet the specifications described above, have a maximum shelf life of six (6) months
- ${\it 2. Certification periods are as prescribed by the EPA Protocol September 1997.}$
- 3. Mixes defined with a six (6) month shelf life can be recertified for a length of time defined by the higher concentration standard if the guidelines defined by the Protocol stability requirements are met.
- 4. Some mixes may not be available due to critical mix limitations and safety considerations.
- To maintain mix stability, EPA Protocol gas mixes should not be used below 150 psig.
- 6. Please contact Matheson if your specific mix requirements are not listed.



EPA Protocol Mixtures (continued)

∆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.