

# The FLAMAL Advantage

There is no single solution to every challenge faced in today's industrial business world. To get an edge on your competitors you need to optimize your processes. Flamal gases can give you that edge, no matter what flame process you use.

## Acetylene C<sub>2</sub>H<sub>2</sub>

Cylinder color: Black or blue

Acetylene is a standard fuel gas used in conjunction with oxygen for welding metals and cutting steel, and for allied oxy-acetylene processes for the heating, forming and treating of metals.

Air-acetylene flames also are, in general, used for brass and aluminum soldering and other plumbing applications where the very high temperature of the oxy-acetylene flame is not required.



ITEM NUMBER	SIZE	VOLUME <sup>1</sup>		CGA CONNECTION	TYPICAL CYLINDER PRESSURES @ 15°C / 70°F
		m <sup>3</sup>	scf		
GAS-ACE2COP	2	0.28	10.10	200	1530 kPa (250 psig)
GAS-ACE8TCOP	8	1.10	39.67	520	1530 kPa (250 psig)
GAS-ACE8COP	8	1.10	39.67	520	1530 kPa (250 psig)
GAS-ACE8MINITOP	8	1.10	39.67	023	1530 kPa (250 psig)
GAS-ACE14	14	2.08	75.01	410	1530 kPa (250 psig)
GAS-ACE23	23	3.60	129.83	410	1530 kPa (250 psig)
GAS-ACE23ALTOP	23	3.60	129.83	023	1530 kPa (250 psig)
GAS-ACE69	69	10.30	371.46	410	1530 kPa (250 psig)
GAS-ACE69ALTOP	69	10.30	371.46	023	1530 kPa (250 psig)

<sup>1</sup> m<sup>3</sup> @ 15°C; scf @ 70°F

<sup>2</sup> Size 8 equipped with tulip cap.

<sup>3</sup> Typical volume; actual volume may vary.

UN Number: UN1001 Hazard Class: 2.1

## Oxygen O<sub>2</sub>

Cylinder color: Red or blue

Oxygen is commonly used in industrial applications in conjunction with acetylene and other fuel gases in processes such as metal cutting, welding, flame hardening, scarfing, cleaning, hard-facing, etc. Oxygen can also be used in medical, aviation and breathing applications.



ITEM NUMBER	SIZE	VOLUME <sup>1</sup>		CGA CONNECTION	TYPICAL CYLINDER PRESSURES @ 15°C / 70°F
		m <sup>3</sup>	scf		
GAS-OXY4COP	4	0.57	20.64	540	14 960 kPa (2217 psig)
GAS-OXY9TCOP	9	1.39	50.00	540	14 960 kPa (2217 psig)
GAS-OXY9COP	9	1.39	50.00	540	14 960 kPa (2217 psig)
GAS-OXY9MINITOP	9	1.39	50.00	022	14 960 kPa (2217 psig)
GAS-OXY16	16	2.75	99.02	540	16 820 kPa (2492 psig)
GAS-OXY22	22	3.45	124.34	540	14 960 kPa (2217 psig)
GAS-OXY44	44	6.90	248.68	540	14 960 kPa (2217 psig)
GAS-OXY44ALTOP	44	6.90	248.68	022	14 960 kPa (2217 psig)
GAS-OXYBP50	16 x 50	150.04	5411.08	540	17 820 kPa (2640 psig)
GAS-OXY160LC	160 L	124.06	4473.96	Gas - 540 Liquid - 440	1585 kPa (230 psig)
GAS-OXY180LC	180 L	138.83	5006.57	Gas - 540 Liquid - 440	1585 kPa (230 psig)
GAS-OXY240LC	240 L	168.84	6125.06	Gas - 540 Liquid - 440	1585 kPa (230 psig)
GAS-OXY450LC	450 L	360.36	12995.78	Gas - 540 Liquid - 440	1585 kPa (230 psig)

<sup>1</sup> m<sup>3</sup> @ 15°C; scf @ 70°F

<sup>2</sup> Size 9 equipped with tulip cap.

<sup>3</sup> 16 standard cylinder BULKPAK.

UN Number: Gas - UN1072 / Liquid - UN1073 Hazard Class: Gas - 2.2 (5.1) / Liquid - 2.2 (5.1)

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## Mapp C<sub>3</sub>H<sub>4</sub>

Cylinder color: Yellow

Mapp is used in all flame processes in which acetylene, propane and natural gas can be used with oxygen. The air-Mapp flame is also used to replace air-acetylene. Mapp is ideally suited for use in machine or hand oxy-cutting. Mapp is also safer than acetylene because it is less explosive (not sensitive to shock), and of lighter weight making cylinders more portable.

ITEM NUMBER	SIZE	VOLUME		CGA CONNECTION	APPROXIMATE CYLINDER PRESSURES @ 15°C / 70°F
		kg	lb		
GAS-MAP13	13	5.50	12.13	510	720 kPa (120.4 psig)
GAS-MAP28	28	13.60	29.98	510	720 kPa (120.4 psig)
GAS-MAP65	65	31.80	70.11	510	720 kPa (120.4 psig)
GAS-MAP108	108	52.20	115.08	510	720 kPa (120.4 psig)
GAS-MAP450	450	200.00	440.92	510	720 kPa (120.4 psig)

UN Number: UN1954 Hazard Class: 2.1



## Propane C<sub>3</sub>H<sub>8</sub>

Cylinder color: White

A liquefied petroleum gas that provides good performance in applications that require overall heat content at an economical cost. Propane does not possess the double and triple bonds found in acetylene and Mapp so does not develop their high flame temperatures or concentrated heat, but its secondary flame produces a high BTU output.

Low pressure welded steel cylinders are used for propane. Most common cylinder capacity: 100 lb\*\*.

Propane is supplied in liquid form under a vapour pressure of 827 kPa (120 psig) at 15°C. Like Mapp, withdrawal rate and vapour pressure vary with temperature.

\*\* Check for availability at your local store

ITEM NUMBER	SIZE	VOLUME		CGA CONNECTION	APPROXIMATE CYLINDER PRESSURES @ 15°C / 70°F
		kg	lb		
GAS-PRO3313	33 1/3	14	30.8	-	720 kPa (120.4 psig)
GAS-PRO100	108	45.4	100	510	720 kPa (120.4 psig)

UN Number: UN1978 Hazard Class: 2.1



\* Not used for flame applications commonly used for carburation (forklifts)