

Cylinder Valve Connections

Technical Information

GAS OR GAS MIXTURE	FORMULA	SPECIFIC GRAVITY	CYLINDER PRESSURE/ VAPOR PRESSURE AT 20 °C	PROPERTIES	DIN 477	BS 341	JIS	CGA	DISS
Acetylene	C ₂ H ₂	0.906	18	f	3	2, 4, 18**	-	510+	-
Ammonia	NH ₃	0.593	8.6	f, t, c	6	10	22-R	240	720
Argon	Ar	1.38	200/300	i	6	3	22-R	580	718
Air, compressed	AIR	1	200	o	13	3	22-R	346	-
Arsine	AsH ₃	2.718	14.1	f, t	1	4	22-L	350	632
Boron Trichloride	BCL ₃	4.045	0.37	t, c	8	6	-	660	634
Boron Trifluoride	BF ₃	2.32	68.9	t, c	8	6	22-L	330	642
Bromotrifluoromethane	CBF ₃	2.37	14.4	o	6	6	-	660	-
Calibration Gas (non corrosive)++		-	150/200	o	14	3, 4*	-	500	-
Carbon Dioxide	CO ₂	1.53	57.3	o	6	8	-	320	716
Carbon Monoxide	CO	0.967	150	f, t	5	4	22-L	350	724
Chlorine	Cl ₂	2.479	6.8	t, c	8	6, 14**	26-R	660	728
Chlorodifluoromethane (R22)	CHClF ₂	3.65	31	o	6	6	26-R	165*	-
Chloropentafluoroethane (R115)	C ₂ ClF ₅	5.49	8	o	5	6	-	165*	716
Cyclopropane	C ₃ H ₆	1.49	6.3	f	1	4	22-L	510	-
Deuterium	D ₂	0.139	100	f	1	4	-	350	-
Diborane	B ₂ H ₆	0.95	150	f, t	1	4	-	350	632
Ethane	C ₂ H ₆	1.05	37.7	f	1	4	22-L	350	-
Ethylene	C ₂ H ₄	0.975	68.6	f	1	4	22-L	350	-
Fluorine	F ₂	1.312	-	t, c	8	6, 14*	22-L	679	728
Helium	He	0.138	200/300	i	6	3	22-R	580	718
Hexafluoro Ethane	C ₂ F ₆	4.83	-	i	6	3	-	660*	716
Hydrogen	H ₂	0.0695	200/300	f	1	4	22-L	350	724
Hydrogen Bromide	HBR	2.71	20	t, c	8	6.14	26-R	330	634
Hydrogen Chloride	HCL	1.266	42.6	t, c	8	6, 14**	26-R	330	634
Hydrogen Fluoride	HF	1.858	1.03	t, c	8	6	26-R	670*	638
Hydrogen Iodide	HJ	4.48	7.33	t, c	8	6, 14*	-	330	-
Hydrogen Sulfide	H ₂ S	1.19	18.2	f, t, c	5	15	26-R	330	722
Isobutane	IC ₄ H ₁₀	2.09	3.02	f	1	4	-	510	-
Isobutene	C ₄ H ₈	2.01	2.59	f	1	4	-	510	-
Krypton	Kr	2.90	200	i	6	3	22-R	580	718
Methane	CH ₄	0.555	200	f	1	4	22-L	350	724
Methylamine	CH ₅ N	1.11	3	f, t	1	11	-	705	-
Methyl Chloride	CH ₃ CL	1.771	4.1	f, t	1	7, 17**	-	510*	-
Methyl Mercaptan	CH ₄ S	1.7	1.7	f, t	1	7	-	330	-
Neon	Ne	0.696	200	i	6	3	22-R	580	718
Nitric Oxide	NO	1.04	50	t, c	8	14	22-R	660	728
Nitrogen	N ₂	0.967	200/300	i	10	3	22-R	580	718
Nitrogen Dioxide	NO ₂	3	0.962	ox, t, c	8	14	-	660	-
Nitrogen Trifluoride	NF ₃	2.46	100	t	8	14	-	670*	-
Nitrous Oxide	N ₂ O	1.528	50.6	ox	11, 12**	13	22-R	326	712
Oxygen	O ₂	1.11	200/300	ox	9	3	22-R	540	714
Phosphine	PH ₃	1.18	34.6	f, t	1	4	22-L	350*	632
Propane	C ₃ H ₈	1.56	8.4	f	1	4	-	510*	-
Propylene (Propene)	C ₃ H ₆	1.48	10.3	f	1	4	22-L	510*	-
Silane	SiH ₄	1.11	86	f, t	1	4	22-L	510	632
Sulfur Dioxide	SO ₂	2.27	3.3	t, c	7	10.16	22-R	660	-
Sulfur Hexafluoride	SF ₆	5.13	22.1	i	6	6**	26-R	590	716
Synthetic Air	O ₂ /N ₂	1	200/300	ox	9	3	22-R	346	-
Tetrafluoro Methane	CF ₄	3.05	up to approx. 137	i	6	3	-	580*	716
Trifluoro Methane R 23 (Fluoroform)	CHF ₃	2.44	41.8	o	6	6	-	660*	716
Xenon	Xe	4.56	up to approx. 33	i	6	3	22-R	580	718

Legend:

f = flammable t = toxic

c = corrosive i = inert

o = other

ox = oxidising

+ = Connection # depends on content and size of cylinder; check standard for other connections!

++ = Connection # depends on exact content of calibration gas; check standard for other connections or ask gas supplier for cylinder valve in use.

* = Not binding - Please, ask gas supplier for cylinder valve in use.

** = For small capacity cylinders (lecture bottles).

Note:

1. consult CGA, DIN, JIS, BS organization specifications for pressure limits

2. Information in this table was obtained from reliable sources and it shall be used for reference only.

3. Actual gas assignments are subject to periodic change and may differ based on pressure range, user must verify all information in this table at the time of use.