



Product Note, PN 428, Revision 5

Gas Data Table

April 29, 2019

NOTE: Conversion factors are multipliers to be used to either convert a given gas flow to N2 or N2 to a given gas flow. AP Tech published flow curves are in N2. Please note that ultimate flow derived by converting N2 to an equivalent flow of another gas might not be achievable due to specific gas properties.

Gas	Gas Formula	Cylinder Pressure			Gas State	Molecular Weight kg/mol	Conversion factor specific gas to N2	Conversion factor N2 to specific gas
		Psig	Bar	MPa				
Acetylene	C ₂ H ₂	250	17.2	1.7	Compressed Gas	0.02604	0.96	1.04
Air		150-2400	10.3-165.5	1-16.5	Compressed Gas	0.02896	1.02	0.98
Ammonia	NH ₃	114	7.9	0.8	Liquified Gas	0.01703	0.78	1.28
Argon	Ar	150-2600	10.3-179.3	1-17.9	Compressed Gas	0.03995	1.19	0.84
Arsine	AsH ₃	150-205	10.3-14.1	1-1.4	Liquified Gas	0.07795	1.67	0.60
Boron Trichloride	BCl ₃	4.4	0.3	0.03	Liquified Gas	0.11717	2.05	0.49
Boron Trifluoride	BF ₃	150-1600	10.3-110.3	1-11.0	Compressed Gas	0.0678	1.56	0.64
Boron 11 Trifluoride	11BF ₃	150-675	10.3-46.5	1-4.6	Compressed Gas	0.0695	1.58	0.63
Butadiene	C ₄ H ₆	21	1.4	0.1	Liquified Gas	0.054	1.39	0.72
Butane	C ₄ H ₁₀	16	1.1	0.1	Liquified Gas	0.058	1.44	0.69
Butene-1	C ₄ H ₈	39	2.7	0.3	Liquified Gas	0.0561	1.42	0.71
Carbon Dioxide	CO ₂	830	57.2	5.7	Liquified Gas	0.04401	1.25	0.80
Carbon Monoxide	CO	150-2000	10.3-137.9	1-13.8	Compressed Gas	0.02801	1.00	1.00
Carbonyl Fluoride	COF ₂	800	55.2	5.5	Liquified Gas	0.066	1.53	0.65
Chlorine	Cl ₂	85	5.9	0.6	Liquified Gas	0.0709	1.59	0.63
Chlorine Trifluoride	ClF ₃	7	0.5	0.05	Liquified Gas	0.09245	1.82	0.55
Deuterium	D2	600-2500	41-172	4.1-17.2	Compressed Gas	0.00402	0.38	2.64
Dichlorosilane	SiH ₂ Cl ₂	9.1	0.6	0.06	Liquified Gas	0.10101	1.90	0.53
Difluoroethylene	C ₂ H ₂ F ₂	517	35.7	3.6	Liquified Gas	0.064	1.51	0.66
Dimethylsilane	C ₂ SiH ₈	36	2.5	0.2	Liquified Gas	0.06017	1.47	0.68
Disilane	Si ₂ H ₆	33	2.3	0.2	Liquified Gas	0.0622	1.49	0.67
Ethylene	C ₂ H ₄	692	47.7	4.8	Liquified Gas	0.02805	1.00	1.00
Fluorine	F ₂	150-300	10.3-20.6	1-2.1	Compressed Gas	0.03799	1.16	0.86
Germane	GeH ₄	53	3.7	0.4	Compressed Gas	0.07666	1.65	0.60
Halocarbon 114	C ₂ ClF ₄	13	0.9	0.1	Liquified Gas	0.1778	2.52	0.40
Halocarbon 115	C ₂ ClF ₅	101	7.0	0.7	Liquified Gas	0.15447	2.35	0.43
Halocarbon 116	C ₂ F ₆	430	29.7	3.0	Liquified Gas	0.13801	2.22	0.45
Halocarbon 125	C ₂ HF ₅	175	12.1	1.2	Liquified Gas	0.12002	2.07	0.48
Halocarbon 134A	C ₂ H ₂ F ₄	81	5.6	0.6	Liquified Gas	0.102	1.91	0.52
Halocarbon 12	CCl ₂ F ₂	70	4.8	0.5	Liquified Gas	0.12089	2.08	0.48
Halocarbon 12B2	CBr ₂ F ₂	2	0.1	0.01	Liquified Gas	0.2096	2.74	0.37
Halocarbon 13	CClF ₃	460	31.7	3.2	Liquified Gas	0.10447	1.93	0.52
Halocarbon 13B1	CBrF ₃	200	13.8	1.4	Liquified Gas	0.14893	2.31	0.43

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		Psig	Bar	MPa				
Halocarbon 14	CF ₄	150-2000	10.3-137.9	1-13.8	Compressed Gas	0.088	1.77	0.56
Halocarbon 21	CHCl ₂ F	8.4	0.6	0.06	Liquified Gas	0.10292	1.92	0.52
Halocarbon 23	CHF ₃	635	43.8	4.4	Liquified Gas	0.070014	1.58	0.63
Halocarbon 32	CH ₂ F ₂	232	16.0	1.6	Liquified Gas	0.05202	1.36	0.73
Halocarbon C318	C ₄ F ₈	25	1.7	0.2	Liquified Gas	0.20004	2.67	0.37
Halocarbon R218	C ₃ F ₈	100	6.9	0.7	Liquified Gas	0.18803	2.59	0.39
Helium	He	150-2600	10.3-179.3	1-17.9	Compressed Gas	0.004	0.38	2.65
Hexafluoropropane	C3H2F6	39	2.7	0.3	Liquified Gas	0.152	2.33	0.43
Hexafluoropropylene	C3F6	85	5.9	0.6	Liquified Gas	0.15	2.31	0.43
Hydrogen	H ₂	150-2600	10.3-179.3	1-17.9	Compressed Gas	0.00202	0.27	3.72
Hydrogen Bromide	HBr	320	22.1	2.2	Liquified Gas	0.08091	1.70	0.59
Hydrogen Chloride	HCl	613	42.3	4.2	Liquified Gas	0.03646	1.14	0.88
Hydrogen Fluoride	HF	0.6	0.04	0.004	Liquified Gas	0.02001	0.85	1.18
Hydrogen Selenide	H ₂ Se	125	8.6	0.9	Liquified Gas	0.08097	1.70	0.59
Hydrogen Sulfide	H ₂ S	253	17.4	1.7	Liquified Gas	0.03407	1.10	0.91
Krypton	Kr	150-1820	10.3-125.5	1-12.5	Compressed Gas	0.0888	1.78	0.56
Methane	CH ₄	150-2400	10.3-165.5	16.5	Compressed Gas	0.01604	0.76	1.32
Methanol	CH ₃ OH	16	1.1	0.1	Liquified Gas	0.03204	1.07	0.94
Methyle Bromide	CH3Br	13	0.9	0.1	Liquified Gas	0.094	1.83	0.55
Methyl Chloride	CH ₃ Cl	59	4.1	0.4	Liquified Gas	0.05048	1.34	0.74
Methylsilane	CH ₃ SiH ₃	192	13.2	1.3	Liquified Gas	0.04614	1.28	0.78
Methyl Fluoride	CH ₃ F	435	30.0	3.0	Liquified Gas	0.03403	1.10	0.91
Neon	Ne	150-2400	10.3-165.5	1-16.5	Compressed Gas	0.02018	0.85	1.18
Nitrogen	N ₂	150-2600	10.3-179.3	1-17.9	Compressed Gas	0.028013	1.00	1.00
Nitrogen Dioxide	NO ₂	14.2	1	0.1	Liquified Gas	.046	1.28	0.78
Nitrogen Trifluoride	NF ₃	150-1450	10.3-100	1-10.0	Compressed Gas	0.071	1.59	0.63
Nitric Oxide	NO	745	51.4	5.1	Compressed Gas	0.03	1.03	0.97
Nitrous Oxide	N ₂ O	750	51.7	5.2	Liquified Gas	0.04401	1.25	0.80
Octofluorocyclobutane	C ₄ F ₈	25	1.7	0.2	Liquified Gas	0.20	2.67	0.37
Octafluorocycle-pentene	C ₅ F ₈	614 mmHg / Torr 20.5 in. Hg Abs.	614 mmHg / Torr 20.5 in. Hg Abs.	614 mmHg / Torr 20.5 in Hg Abs.	Liquified Gas	0.21204	2.75	0.36
Oxygen	O ₂	150-2600	10.3-179.3	1-17.9	Compressed Gas	0.03199	1.07	0.94
Perfluoropropane	C ₃ F ₈	100	6.9	0.7	Liquified Gas	0.18802	2.59	0.39
Perfluorobuta-diene	C ₄ F ₆	15	1.0	0.1	Liquified Gas	0.16203	2.41	0.42
Phosphine	PH ₃	590	40.7	4.1	Liquified Gas	0.03399	1.10	0.91
Phosphorous Pentafluoride	PF ₅	2000	137.9	13.8	Liquified Gas	0.12596	2.12	0.47
Propane	C ₃ H ₈	92	6.3	0.6	Liquified Gas	0.04409	1.25	0.80
Propene	C ₃ H ₆	149	10.3	1.0	Liquified Gas	0.04208	1.23	0.82
Silane	SiH ₄	150-1400	10.3-96.5	1-9.6	Compressed Gas	0.03211	1.07	0.93
Silicone Tetrachloride	SiCl ₄	194 mmHg / Torr 6.5 in. Hg Abs.	194 mmHg / Torr 6.5 in. Hg Abs.	194 mmHg / Torr 6.5 in. Hg Abs.	Liquified Gas	0.16489	2.43	0.41
Silicon Tetrafluoride	SiF ₄	150-1000	10.3-69	1-6.9	Compressed Gas	0.10408	1.93	0.52
Sulfur Dioxide	SO ₂	30	2.1	0.2	Liquified Gas	0.06406	1.51	0.66
Sulfur Hexafluoride	SF ₆	320	22.1	2.2	Liquified Gas	0.146054	2.28	0.44
Sulfur Tetrafluoride	SF ₄	140	9.7	1.0	Liquified Gas	0.10806	1.96	0.51
Trichlorosilane	HSiCl ₃	20	1.4	0.1	Liquified Gas	0.1355	2.20	0.45
Trimethylsilane	(CH ₃) ₃ SiH	10	0.7	0.1	Liquified Gas	0.07419	1.63	0.61
Tungsten Hexafluoride	WF ₆	2	0.1	0.01	Liquified Gas	0.2978	3.26	0.31
Xenon	Xe	150-970	10.3-66.9	1-6.7	Compressed Gas	0.1313	2.16	0.46