

Vapor Pressure Data for use with CTI-CRYOGENICS® High Vacuum Pumps.

Temperatures (°K) for Vapor Pressure (Torr)

Compound	Temperatures (°K) for Vapor Pressure (Torr)																	
	10 ⁻¹³	10 ⁻¹²	10 ⁻¹¹	10 ⁻¹⁰	10 ⁻⁹	10 ⁻⁸	10 ⁻⁷	10 ⁻⁶	10 ⁻⁵	10 ⁻⁴	10 ⁻³	10 ⁻²	10 ⁻¹	1	10 ¹	10 ²	10 ³	
S																		
He	HELIUM												0.98	1.268	1.738	2.634	4.518	
H ₂	HYDROGEN	2.67	2.83	3.01	3.21	3.45	3.71	4.03	4.40	4.84	5.38	6.05	6.90	8.03	9.55	11.70	15.10	21.4
Ne	NEON	5.50	5.79	6.11	6.47	6.88	7.34	7.87	8.48	9.19	10.05	11.05	12.30	13.85	15.80	18.45	22.10	27.5
CH ₄	METHANE	24.0	25.3	26.7	28.2	30.0	32.0	34.2	36.9	39.9	43.5	47.7	52.9	59.2	67.3	77.7	91.7	115.0
F ₂	FLUORINE														(55.2)	59.5	70.5	87.5
N ₂	NITROGEN	18.1	19.0	20.0	21.1	22.3	23.7	25.2	27.0	29.0	31.4	34.1	37.5	41.5	47.0	54.0	63.4	80.0
CO	CARBON MONOXIDE	20.5	21.5	22.6	23.8	25.2	26.7	28.4	30.3	32.5	35.0	38.0	41.5	45.8	51.1	57.9	67.3	84.1
O ₂	OXYGEN	21.8	22.8	24.0	25.2	26.6	28.2	29.9	31.9	34.1	36.7	39.8	43.3	48.1	54.1	62.7	74.5	92.8
Kr	KRYPTON	27.9	29.4	30.9	32.7	34.6	36.8	39.3	42.2	45.5	49.4	53.9	59.4	66.3	74.8	85.9	101.1	123.5
NO	NITRIC OXIDE	37.7	39.4	41.3	43.4	45.6	48.1	50.9	54.0	57.6	61.6	66.3	71.7	78.1	85.7	95.0	106.5	123.5
Ar	ARGON	20.3	21.3	22.5	23.7	25.2	26.8	28.6	30.6	33.1	35.9	39.2	43.2	48.2	54.4	62.5	73.4	89.9
N ₂ O	NITROUS OXIDE	55.8	58.3	61.1	64.2	67.6	71.3	75.5	80.3	85.7	91.9	99.0	107.5	117.5	129.5	144.0	162.5	189.5
CO ₂	CARBON DIOXIDE	59.5	62.2	65.2	68.4	72.1	76.1	80.6	85.7	91.5	98.1	106.0	114.5	125.0	137.5	153.5	173.0	198.0
Xe	XENON	38.5	40.5	42.7	45.1	47.7	50.8	54.2	58.2	62.7	68.1	74.4	82.1	91.5	103.5	118.5	139.5	170.0
HBr	HYDROGEN BROMIDE	51.8	54.3	57.1	60.2	63.7	67.6	72.1	77.1	82.9	89.6	97.5	107.0	118.5	132.5	151.0	175.0	209.0
HCl	HYDROGEN CHLORIDE	49.7	52.1	54.6	57.5	60.6	64.1	68.1	72.5	77.6	83.4	90.1	98.1	108.5	121.0	137.0	158.5	193.0
NH ₃	AMMONIA	70.9	74.1	77.6	81.5	85.8	90.6	95.9	102.0	108.5	116.5	125.5	136.0	148.0	163.0	181.0	206.0	245.0
H ₂ S	HYDROGEN SULFIDE	57.1	59.8	62.7	65.9	69.5	73.5	78.0	83.1	89.0	95.7	103.5	113.5	124.5	138.5	156.5	180.5	218.0
COS	CARBONYL SULFIDE													(124.5)	139.5	159.5	187.0	229.0
Cl ₂	CHLORINE	66.1	69.1	72.4	76.0	80.0	84.4	89.4	95.1	101.5	109.0	117.5	127.5	140.0	155.0	173.0	201.0	245.0
H ₂ O	WATER	113.0	118.5	124.0	130.0	137.0	144.5	153.0	162.0	173.0	185.0	198.5	215.0	233.0	256.0	284.0	325.0	381.0
SO ₂	SULFUR DIOXIDE	78.9	82.4	86.3	90.4	95.1	100.0	106.0	112.5	119.5	128.0	137.5	148.5	161.5	177.0	195.5	225.0	269.0
CS ₂	CARBON DISULFIDE												(160.0)	177.5	199.5	228.0	269.0	329.0
HF	HYDROGEN FLUORIDE													(179.0)	207.0	245.0	301.0	
Br ₂	BROMINE	102.0	106.5	111.0	116.5	122.0	128.5	135.5	143.5	152.5	163.0	174.5	188.5	204.0	224.0	248.0	282.0	339.0
I ₂	IODINE	141.5	147.5	154.0	161.5	169.5	178.5	188.5	199.5	212.0	226.0	243.00	262.0	285.0	312.0	345.0	389.0	471.0

⊙ Melting Point

∖ Transition Point

PRESSURE CONVERSION CHART

To Convert From	To	pa	Torr	atm MULTIPLY BY	mbar	psi	kg/cm ²	μ
pascal (Newtons/m ²)		1	7.5×10^{-3}	9.87×10^{-6}	10^{-2}	1.45×10^{-4}	10.2×10^{-6}	7.5
Torr (mm of mercury)		133	1	1.316×10^{-3}	1.333	1.934×10^{-2}	1.359×10^{-3}	1000
atm (atmosphere)		1.013×10^5	760	1	1013	14.7	1.033227	7.6×10^5
mbar (millibar)		100	0.75	9.87×10^{-4}	1	1.45×10^{-2}	1.02×10^{-3}	750.1
psi (lb/in ²)		6.89×10^3	51.71	6.8×10^{-2}	68.9	1	0.070307	5.171×10^4
kg/cm ²		9.81×10^4	735.6	.968	981	14.2	1	7.352×10^5
μ (micron)		0.1333	1×10^{-3}	1.316×10^{-6}	1.333×10^{-3}	1.934×10^{-5}	1.3595×10^{-6}	1

CTI-CRYOGENICS

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