



UNAPPROVED Panther Sensitivity Chart

Gas Type Name	Trade Name	Gas Group 1-5	Chemical Formula	Molecular Weight	Response Factor (He = 1)	Minimum Sensitivity				Calc. (C) or Tested (T)	Conductivity at 400 K mW/mK	Conductivity vs Air mW/mK
						ppm	cc/sec	mg/m ³	g/yr			
Air											33.3	0
GAS GROUP 1a				6.0	1	200	6.7E-06	49	0.052			
GAS GROUP 1b				150.0	1	200	6.7E-06	1227	1.290			
GAS GROUP 2a				15.0	2.5	400	1.3E-05	245	0.258			
GAS GROUP 2b				84.0	2.5	400	1.3E-05	1374	1.445			
GAS GROUP 3a				20.0	4	600	2.0E-05	491	0.516			
GAS GROUP 3b				61.0	4	600	2.0E-05	1497	1.574			
GAS GROUP 4a				26.0	8	1000	3.3E-05	1063	1.118			
GAS GROUP 4b				48.0	8	1000	3.3E-05	1963	2.064			
GAS GROUP 5				36.0	16	3000	1.0E-04	4417	4.643			
Helium		1	He	4.0	1.0	150	5.0E-06	25	0.026	T	190.6	157.3
Hydrogen		1	H ₂	2.0	0.6	97	3.2E-06	8	0.008	T	230.4	197.1
Sulfur hexafluoride		1	SF ₆	146.1	1.4	217	7.2E-06	1298	1.364	C	20.6	-12.7
Xenon		1	Xe	131.3	1.4	217	7.2E-06	1165	1.225	T	7.3	-26
m-Xylene		1	C ₈ H ₁₀	106.0	1.9	280	9.3E-06	1215	1.277	C	17.71	-15.59
Perfluorocyclobutane	C318	1	C ₄ F ₈	200.0	1.2	178	5.9E-06	1457	1.531	C	19.5	-13.8
Refrigerant R 448a	R448a	1	26% CH ₂ F ₂ · 26% C ₂ HF ₅ · 21% C ₂ H ₂ F ₄ · 7% C ₃ H ₂ F ₄ · 7% C ₃ H ₂ F ₄ · 20% C ₃ H ₂ F ₄	189.9	1.9	285	9.5E-06	2214	2.327	C		
Halon 1301	R13B1	1	CBrF ₃	148.9	1.2	180	6.0E-06	1096	1.152	C		
Toluene		2	C ₇ H ₈	92.0	2.1	321	1.1E-05	1209	1.271	C	19.3	-14
Ammonia	R717	2	NH ₃	17.0	2.9	428	1.4E-05	298	0.313	C	37.4	4.1
Pentane		2	C ₅ H ₁₂	72.2	2.9	429	1.4E-05	1266	1.331	C	24.9	-8.4
Tetrafluoropropene	R1234yf	2	C ₃ H ₂ F ₄	114.0	2.5	372	1.2E-05	1736	1.825	T		
Tetrafluoroethane	R134a	2	C ₂ H ₂ F ₄	102.0	2.9	432	1.4E-05	1803	1.895	T	14	-19.3
Tetrafluoromethane	R14	2	CF ₄	88.0	2.2	337	1.1E-05	1212	1.274	C	24.1	-9.2
Refrigerant R 404a	R404a	2	44±2% C ₂ HF ₅ · 52±1% C ₂ H ₃ F ₃ · 4±2% C ₂ H ₂ F ₄	97.6	2.8	420	1.4E-05	1677	1.762	C		
Refrigerant R 407c	R407c	2	23±2% CH ₂ F ₂ · 25±2% C ₂ HF ₅ · 52±2% C ₂ H ₂ F ₄	86.2	3.2	480	1.6E-05	1692	1.779	C		
Refrigerant R 410a	R410a	2	50% CH ₂ F ₂ · 50% CHF ₂ CF ₃	72.6	3.8	570	1.9E-05	1693	1.779	C		
Refrigerant R 449a	R449a	2	24.3% CH ₂ F ₂ · 24.7% C ₂ HF ₅ · 25.7% C ₂ H ₂ F ₄ · 25.3% C ₃ H ₂ F ₄	87.2	2.2	327	1.1E-05	1166	1.226	C		
Krypton		2	Kr	83.8	2.3	345	1.2E-05	1182	1.243	C	12.3	-21
Methane		3	CH ₄	16.0	4.0	601	2.0E-05	394	0.415	T	49.1	15.8
Isobutane	R600a	3	C ₄ H ₁₀	58.1	3.8	577	1.9E-05	1372	1.442	T	27.9	-5.4
Isopropanol		3	C ₃ H ₈ O	60.0	3.8	577	1.9E-05	1416	1.489	C		
Butane		3	C ₄ H ₁₀	58.1	4.6	683	2.3E-05	1624	1.708	T	28.4	-4.9
Isobutylene		3	C ₄ H ₈	55.1	3.6	536	1.8E-05	1209	1.271	T		
Sulfur dioxide		3	SO ₂	64.1	3.4	514	1.7E-05	1347	1.416	C	14.3	-19
Ethylene oxide		3	C ₂ H ₄ O	54.0	4.8	718	2.4E-05	1585	1.666	C	25	-8.3
Argon		4	Ar	40.0	6.6	990	3.3E-05	1617	1.700	T	22.6	-10.7
Carbon dioxide	R774	4	CO ₂	44.0	5.6	836	2.8E-05	1506	1.583	T	25.1	-8.2
Propane	R290	4	C ₃ H ₈	44.1	6.1	917	3.1E-05	1654	1.739	T	30.6	-2.7
Nitrogen		4	N ₂	28.0	9.2	1377	4.6E-05	1578	1.659	C	32.3	-1
Nitrous oxide		4	N ₂ O	44.0	7.3	1095	3.6E-05	1971	2.072	T	26	-7.3
Acetylene		4	C ₂ H ₂	26.0	6.9	1036	3.5E-05	1103	1.160	C	45.4	12.1
Ethylene		4	C ₂ H ₄	28.1	9.3	1399	4.7E-05	1605	1.688	C	34.6	1.3
Carbon monoxide		4	CO	28.0	9.2	1377	4.6E-05	1578	1.659	C	32.3	-1
Methanol		5	CH ₄ O	32.0	22.6	3387	1.1E-04	4439	4.666	C	26.2	-7.1
Oxygen		5	O ₂	32.0	22.6	3387	1.1E-04	4433	4.660	C	33.7	0.4
Nitric oxide		5	NO	30.0	13.2	1986	6.6E-05	2438	2.563	C	33.1	-0.2



IO-004300-CD V4
March 2026