



PROVIDENCE



RESPONSE FACTORS

RESPONSE FACTORS

CAS REGISTRY NUMBER*	CHEMICAL NAME	RESPONSE FACTOR**	CAS REGISTRY NUMBER*	CHEMICAL NAME	RESPONSE FACTOR**	CAS REGISTRY NUMBER*	CHEMICAL NAME	RESPONSE FACTOR**	CAS REGISTRY NUMBER*	CHEMICAL NAME	RESPONSE FACTOR**
431-89-0	1_1_1_2_3_3_3-Heptafluoropropane	0.103	75-89-8	2_2_2-Trifluoroethanol	0.326	108-99-6	3-Picoline	0.992	124-38-9	Carbon_dioxide	0.000
630-20-6	1_1_1_2-Tetrachloroethane	0.132	25256-77-4	2_2_4-Trimethyl-1_3-pentanediol...	1.086	106-43-4	4-Chlorotoluene	0.815	75-15-0	Carbon_disulfide	0.001
75-68-3	1_1_1-Chlorodifluoroethane	0.117	107-40-4	2_2_4-Trimethyl-2-pentene	1.262	622-96-8	4-Ethyltoluene	1.426	630-08-0	Carbon_monoxide	0.000
71-55-6	1_1_1-Trichloroethane	0.121	306-83-2	2_2-Dichloro-1_1_1-trifluoroethane	0.047	626-89-1	4-Methyl-1-pentanol	0.872	353-50-4	Carbonyl_fluoride	0.020
421-50-1	1_1_1-Trifluoroacetone	0.086	76-11-9	2_2-Difluorotetrachloroethane	0.000	691-37-2	4-Methyl-1-pentene	1.209	463-58-1	Carbonyl_sulfide	0.087
420-46-2	1_1_1-Trifluoroethane	0.106	75-83-2	2_2-Dimethyl_butane	1.944	108-89-4	4-Picoline	0.995	108-90-7	Chlorobenzene	0.715
354-14-3	1_1_2_2-Tetrachloro-1-fluoroethane	0.046	431-03-8	2_3-Butanedione	0.274	100-40-3	4-Vinyl-1-cyclohexene	1.275	75-45-6	Chlorodifluoromethane	0.287
79-34-5	1_1_2_2-Tetrachloroethane	0.069	78-88-6	2_3-Dichloro-1-propene	0.279	623-93-8	5-nonanol	1.021	75-00-3	Chloroethane	0.686
79-00-5	1_1_2-Trichloroethane	0.102	79-29-8	2_3-Dimethylbutane	1.014	64-19-7	Acetic_acid	0.238	67-66-3	Chloroform	0.006
1717-00-6	1_1-Dichloro-1-fluoroethane	0.120	107-39-1	2_4_4-Trimethyl-1-pentene	1.212	108-24-7	Acetic_anhydride	0.244	3188-13-4	Chloromethyl_ethyl_ether	1.881
75-34-3	1_1-Dichloroethane	0.272	584-84-9	2_4-Diisocyanatetoluene	0.895	6993-75-7	Acetid_acid_dimer	2.217	107-30-2	Chloromethyl_methyl_ether	0.851
75-35-4	1_1-Dichloroethene	0.017	87-62-7	2_6-Dimethylaniline	1.308	116-09-6	Acetol	0.368	76-15-3	Chloropentafluoroethane	0.001
471-43-2	1_1-Difluoro-2_2-dichloroethane	0.352	75-26-3	2-Bromopropane	0.733	67-64-1	Acetone	0.546	76-06-2	Chloropicrin	0.090
73-37-6	1_1-Difluoroethane	0.535	107-01-7	2-Butene	1.204	75-86-5	Acetone_cyanohydrin	0.543	79-38-9	Chlorotrifluoroethylene	0.026
57-14-7	1_1-Dimethylhydrazine	0.897	111-76-2	2-Butoxyethanol	1.962	75-05-8	Acetonitrile	0.074	75-72-9	Chlorotrifluoromethane	0.002
119-64-2	1_2_3_4-Tetrahydronaphthaline	2.439	554-61-0	2-Carene	1.286	75-36-5	Acetyl_chloride	0.079	156-59-2	cis-1_2-Dichloroethylene	0.147
488-23-3	1_2_3_4-Tetramethylbenzene	1.484	75-88-7	2-Chloro-1_1_1-trifluoroethane	0.100	75-07-0	Acetylaldehyde	0.310	10061-01-5	cis-1_3-Dichloropropene	0.232
527-53-7	1_2_3_5-Tetramethylbenzene	1.402	107-07-3	2-Chloroethanol	0.593	74-86-2	Acetylene	0.001	627-20-3	cis-2-Pentene	1.269
124-73-2	1_2-Dibomotetrafluoroethane	0.001	628-34-2	2-Chloroethyl_ether	0.966	107-02-8	Acrolein	0.212	691-38-3	cis-4-Methyl-2-pentene	1.257
354-23-4	1_2-Dichloro-1_1_2-trifluoroethane	0.068	75-29-6	2-Chloropropane	0.734	814-68-6	Acrylol_chloride	0.076	98-82-8	Cumene	1.357
430-57-9	1_2-Dichloro-1-fluoroethane	0.164	95-49-8	2-Chlorotoluene	0.781	107-13-1	Acrylonitrile	0.052	2074-87-5	Cyanogen	0.001
107-06-2	1_2-Dichloroethane	0.270	111-15-9	2-Ethoxyethyl_acetate	1.071	463-49-0	Allene	0.305	506-77-4	Cyanogen_chloride	0.018
540-59-0	1_2-Dichloroethene	0.145	104-76-7	2-Ethyl-1-hexanol	1.028	107-18-6	Allyl_alcohol	0.801	293-96-9	Cyclodecane	2.164
78-87-5	1_2-Dichloropropane	0.461	611-14-3	2-Ethyltoluene	1.424	106-95-6	Allyl_bromide	0.405	291-64-5	Cycloheptane	1.458
431-06-1	1_2-Difluoro-1_2-dichloroethane	0.121	371-62-0	2-Fluoroethanol	0.735	107-05-1	Allyl_chloride	0.482	628-92-2	Cycloheptene	1.033
76-12-0	1_2-Difluorotetrachloroethane	0.000	138495-42-8	2H_3H-Perfluoropentane	0.084	818-92-8	Allyl_fluoride	0.768	108-93-0	Cyclohexanol	0.670
110-71-4	1_2-Dimethoxyethane	2.215	626-93-7	2-Hexanol	0.988	556-56-9	Allyl_iodide	0.759	108-94-1	Cyclohexanone	0.798
106-89-8	1_2-Epoxy-3-chloropropane	0.667	591-78-6	2-Hexanone	2.015	57-06-7	Allyl_isothiocyanate	0.599	110-83-8	Cyclohexene	2.117
106-88-7	1_2-Epoxybutane	1.191	558-17-6	2-Iodo-2-methylpropane	1.708	7785-26-4	alpha-Pinene (-)	1.269	292-64-8	Cyclooctane	1.664
75-56-9	1_2-Epoxypropane	1.046	75-30-9	2-Iodopropane	0.729	7664-41-7	Ammonia_anhydrous	0.003	287-92-3	Cyclopentane	1.006
106-99-0	1_3-Butadiene	0.665	109-86-4	2-Methoxyethanol	0.977	1002-16-0	Amyl_nitrate	0.956	142-29-0	Cyclopentene	1.126
142-28-9	1_3-Dichloropropane	0.547	563-46-2	2-Methyl-1-butene	1.202	62-53-3	Aniline	0.670	75-19-4	Cyclopropane	0.724
123-91-1	1_4-Dioxane	0.782	763-29-1	2-Methyl-1-pentene	1.220	7784-42-1	Arsine	0.011	123-42-2	Diacetone_alcohol	0.859
106-94-5	1-Bromopropane	0.823	78-84-2	2-Methyl-1-propanal	0.809	100-52-7	Benzaldehyde	0.506	19287-45-7	Diborane	0.005
25167-67-3	1-Butene	2.321	513-44-0	2-Methyl-1-propanethiol	0.818	71-43-2	Benzene	0.638	74-95-3	Dibromomethane	0.054
107-00-6	1-Butyne	0.749	78-85-3	2-Methyl-2-propanal	0.546	108-98-5	Benzenethiol	0.466	75-43-4	Dichlorofluoromethane	0.028
354-25-6	1-Chloro-1_1_2_2-tetrafluoroethane	0.157	534-22-5	2-Methylfuran	0.516	100-47-0	Benzonitrile	0.306	75-09-2	Dichloromethane	0.104
513-36-0	1-Chloro-2-methylpropane	0.860	79-46-9	2-Nitropropane	1.305	100-51-6	Benzyl_alcohol	1.912	676-83-5	Dichloromethylphosphine	0.057
109-69-3	1-Chlorobutane	0.934	821-55-6	2-Nonanone	1.070	100-39-0	Benzyl_bromide	0.643	4109-96-0	Dichlorosilane	0.019
543-59-9	1-Chloropentane	0.991	3777-69-3	2-Pentylfuran	0.944	100-44-7	Benzyl_chloride	0.652	64-67-5	Diethyl_sulfate	0.890
373-14-8	1-Fluorohexane	0.989	109-06-8	2-Picoline	0.892	18172-67-3	beta-Pinene	1.256	352-93-2	Diethyl_sulfide	0.954
111-70-6	1-Heptanol	2.002	100-69-6	2-Vinylpyridine	0.727	111-44-4	bis(2-Chloroethyl)_ether	0.801	109-89-7	Diethylamine	1.012
142-62-1	1-Hexanoic_acid	0.896	760-23-6	3_4-Dichloro-1-butene	0.370	10294-34-5	Boron_trichloride	0.000	96-22-0	Diethylketone	0.986
111-27-3	1-Hexanol	0.965	108-41-8	3-Chlorotoluene	1.609	7637-07-2	Boron_trifluoride	0.041	75-61-6	Difluorodibromomethane	0.001
592-41-6	1-Hexene	1.258	620-14-4	3-Ethyltoluene	1.429	353-59-3	Bromochlorodifluoromethane	0.001	75-10-5	Difluoromethane	0.671
108-03-2	1-Nitropropane	0.763	563-45-1	3-Methyl-1-butene	1.134	74-97-5	Bromochloromethane	0.071	75-11-6	Diiodomethane	0.046
124-11-8	1-Nonene	1.278	565-61-7	3-Methyl-2-pentanone	1.013	75-63-8	Bromotrifluoromethane	0.001	108-20-3	Diisopropyl_ether	0.996
111-66-0	1-Octene	1.279	930-27-8	3-methylfuran	0.596	123-86-4	Butyl_acetate	2.021	108-18-9	Diisopropylamine	0.973
109-67-1	1-Pentene	1.086	589-34-4	3-Methylhexane	1.051	123-72-8	Butyraldehyde	1.720	109-87-5	Dimethoxymethane	1.170
71-23-8	1-Propanol	0.947	96-14-0	3-Methylpentane	1.044	107-92-6	Butyric_acid	0.789	616-38-6	Dimethyl_carbonate	0.981
			584-02-1	3-Pentanol	0.994	462-94-2	Cadaverine	0.804	624-92-0	Dimethyl_disulfide	0.520

*CAS Registry Number is a Registered Trademark of the American Chemical Society. **Response factors listed are relative to propane & based on concentration path-length of 10,000 ppm-m. For other conditions, visit <http://rfcalc.providencephotonics.com>. Valid for FLIR GF300, GF320, and GFx320 cameras.



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115-10-6	Dimethyl_ether	1.048	74-90-8	Hydrogen_cyanide	0.001	617-84-5	N_N-diethyl_formamide	1.010	91-22-5	Quinoline	0.762
77-78-1	Dimethyl_sulfate	0.736	7664-39-3	Hydrogen_fluoride__anhydrous	0.006	97-66-7	N_N-Diethylaniline	1.506	625-30-9	sec-Amylamine	0.950
75-18-3	Dimethyl_sulfide	0.738	7722-84-1	Hydrogen_peroxide	0.000	628-63-7	n-Amyl_acetate	1.048	78-92-2	sec-Butyl_alcohol	0.952
67-68-5	Dimethyl_sulfoxide	0.312	2148878	Hydrogen_sulfide	0.000	106-97-8	n-Butane	1.011	138-98-9	sec-Butylbenzene	1.436
124-40-3	Dimethylamine	0.929	13463-40-6	Iron_pentacarbonyl	0.005	71-36-3	n-Butyl_alcohol	1.929	7803-62-5	Silane	0.040
79-44-7	Dimethylcarbamoyl_chloride	0.882	123-51-3	Isoamyl_alcohol	0.924	111-36-4	n-Butyl_isocyanate	0.979	100-42-5	Styrene	0.813
111-43-3	Dipropyl_ether	1.068	75-28-5	Isobutane	0.879	109-73-9	n-Butylamine	0.933	96-09-3	Styrene_oxide	0.997
34590-94-8	Dipropylene_glycol_methyl_ether	1.083	115-11-7	Isobutene	1.104	124-18-5	n-Decane	1.088	2025884	Sulfur_dioxide	0.000
5989-27-5	d-Limonene	1.406	110-19-0	Isobutyl_acetate	0.945	75-84-3	Neopentyl_alcohol	1.777	2025949	Sulfur_trioxide	0.001
74-84-0	Ethane	1.082	103-65-1	Isocumene	1.406	142-82-5	n-Heptane	2.074	2699-79-8	Sulfuryl_fluoride	0.003
141-78-6	Ethyl_acetate	0.857	540-84-1	Isooctane	1.018	592-76-7	n-Heptene	1.278	75-65-0	t-Butyl_alcohol	1.735
140-88-5	Ethyl_acrylate	0.850	78-78-4	Isopentane	0.979	110-54-3	n-Hexane	1.027	994-05-8	tert-Amyl_methyl_ether	1.117
64-17-5	Ethyl_alcohol	0.913	123-92-2	Isopentyl_acetate	1.019	13463-39-3	Nickel_carbonyl	0.007	594-39-8	tert-Amylamine	0.972
100-41-4	Ethyl_benzene	1.327	78-59-1	Isophorone	1.012	7697-37-3	Nitric_acid__anhydrous	0.135	540-88-5	tert-Butyl_acetate	1.007
74-96-4	Ethyl_bromide	0.622	108-21-4	Isopropyl_acetate	0.831	10102-43-9	Nitric_oxide	0.000	1634-04-4	tert-Butyl_methyl_ether	1.039
105-54-4	Ethyl_butyrate	1.048	590-86-3	Isovaleraldehyde	0.852	98-95-3	Nitrobenzene	0.644	98-06-6	tert-Butylbenzene	1.411
541-41-3	Ethyl_chloroformate	0.626	108-39-4	m-Cresol	0.964	10102-44-0	Nitrogen_dioxide	0.123	127-18-4	Tetrachloroethylene	0.002
107-12-0	Ethyl_cyanide	0.567	920-46-7	Methacryloyl_chloride	0.720	10544-72-6	Nitrogen_dioxide_and_dinitrogen_...	0.425	75-73-0	Tetrafluoromethane	0.001
109-94-4	Ethyl_formate	0.913	74-82-8	Methane	0.297	7783-54-2	Nitrogen_trifluoride	0.000	110-01-0	Tetrahydrothiophene	1.437
75-08-1	Ethyl_mercaptan	0.714	124-63-0	Methanesulfonyl_chloride	0.019	75-52-5	Nitromethane	0.173	110-02-1	Thiophene	0.252
540-67-0	Ethyl_methyl_ether	1.077	79-20-9	Methyl_acetate	1.524	2696-92-6	Nitrosyl_chloride	0.001	463-71-8	Thiophosgene	0.000
109-95-5	Ethyl_nitrite	0.738	105-45-3	Methyl_acetoacetate	0.903	7782-77-6	Nitrous_acid	0.142	7550-45-0	Titanium_tetrachloride	0.001
637-92-3	Ethyl_tert-butyl_ether	1.037	96-33-3	Methyl_acrylate	0.757	111-84-2	n-Nonane	1.068	156-60-5	trans-1_2-Dichloroethene	0.262
383-63-1	Ethyl_trifluoroacetate	0.598	126-98-7	Methyl_acrylonitrile	0.375	629-62-9	n-Pentadecane	0.988	646-04-8	trans-2-Pentene	1.220
75-04-7	Ethylamine	0.884	93-58-3	Methyl_benzoate	0.999	629-50-5	n-Tridecane	1.095	75-25-2	Tribromomethane	0.043
74-85-1	Ethylene	0.440	74-83-9	Methyl_bromide	0.276	1120-21-4	n-Undecane	1.101	75-69-4	Trichlorofluoromethane	0.000
75-21-8	Ethylene_oxide	0.830	628-28-4	Methyl_butyl_ether	1.102	111-65-9	Octane	1.053	359-29-5	Trichlorofluoroethylene	0.005
420-12-2	Ethylene_sulfide	0.360	74-87-3	Methyl_chloride	0.402	124-07-2	Octanoic_acid	1.976	121-44-8	Triethylamine	2.217
107-15-3	Ethylenediamine	0.628	74-87-3	Methyl_chloride	0.402	95-53-4	o-Toluidine	2.220	75-05-1	Trifluoroacetic_acid	2.009
75-03-6	Ethylidide	0.572	593-53-3	Methyl_fluoride	0.765	95-47-6	o-Xylene	1.347	407-25-0	Trifluoroacetic_anhydride	0.021
430-51-3	Fluoroacetone	0.394	107-31-3	Methyl_formate	0.830	123-63-7	Paraldehyde	0.712	75-46-7	Trifluoromethane	0.554
462-06-6	Fluorobenzene	0.367	74-88-4	Methyl_iodide	0.182	354-33-6	Pentafluoroethane	0.168	373-80-8	Trifluoromethylsulfur_pentafluoride	0.002
64-48-6	Formic_acid	0.380	110-12-3	Methyl_isoamyl_ketone	0.996	594-42-3	Perchloromethyl_mercaptan	0.001	334-99-6	Trifluoronitrosomethane	0.016
14523-98-9	Formic_acid__dimer	2.203	108-10-1	Methyl_isobutyl_ketone	0.988	355-25-9	Perfluorobutane	0.000	75-50-3	Trimethylamine	0.938
76-14-2	Freon-114	0.000	547-63-7	Methyl_isobutyrate	1.065	382-21-8	Perfluoroisobutylene	0.015	7783-82-6	Tungsten_hexafluoride	0.000
75-71-8	Freon-12	0.000	563-80-4	Methyl_isopropyl_ketone	1.874	108-95-2	Phenol	0.516	110-62-3	Valeraldehyde	0.910
811-97-2	Freon-134a	0.245	74-93-1	Methyl_mercaptan	0.422	10025-87-3	Phosphorous_oxychloride	0.000	108-15-4	Vinyl_acetate	0.304
76-19-7	Freon-218	0.001	80-62-6	Methyl_methacrylate	0.962	110-89-4	Piperidine	0.670	593-60-2	Vinyl_bromide	0.099
98-01-1	Furfural	0.065	624-91-9	Methyl_nitrate	0.556	74-98-6	Propane	1.000	75-02-5	Vinyl_fluoride	0.096
98-00-0	Furfuryl_alcohol	0.874	598-98-1	Methyl_pivalate	1.111	107-19-7	Propargyl_alcohol	0.317	100-80-1	Vinyl_toluene	1.242
7782-65-2	Germane	0.036	554-12-1	Methyl_propionate	1.992	624-65-7	Propargyl_chloride	0.113	7732-18-5	Water	0.003
107-22-2	Glyoxal	0.139	107-87-9	methyl_propyl_ketone	2.958	115-07-1	Propene	0.976	14940-63-7	Water-d1	0.005
90-05-1	Guaiacol	0.992	119-36-8	Methyl_salicylate	1.110	123-38-6	Propionaldehyde	1.506			
87-68-3	Hexachloro-1_3-butadiene	0.002	74-89-5	Methylamine	0.796	79-09-4	Propionic_acid	0.709			
684-16-2	Hexafluoroacetone	0.012	78-93-3	Methylethyl_ketone	0.890	109-06-4	Propyl_acetate	1.940			
392-56-3	Hexafluorobenzene	0.070	78-98-8	Methylglyoxal	0.196	108-32-7	Propylene_carbonate	0.802			
76-16-4	Hexafluoroethane	0.003	75-79-6	Methyltrichlorosilane	0.053	57-55-6	Propylene_glycol	0.874			
381-10-5	Hexafluoroisobutylene	0.015	78-94-4	Methylvinyl_ketone	0.435	75-55-8	Propylenimine	1.077			
116-15-4	Hexafluoropropene	0.027	60-34-4	Monomethyl_hydrazine	0.582	74-99-7	Propyne	0.654			
142-92-7	Hexyl_acetate	1.082	110-91-8	Morpholine	0.793	106-42-3	p-Xylene	2.633			
7647-01-0	Hydrogen_chloride__anhydrous	0.104	108-38-3	m-Xylene	1.292	110-86-1	Pyridine	0.633			
			123-35-3	Myrcene	1.396						

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