



**MITECH**

# MITECH FLUID CHARTS

**METRIC**

**IMPERIAL**

Fluid Name	Formula	Molecular Wt	Boiling Point	Vap Pressure	Critical T	Critical P	Specific Gravity	
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## Metric

A			Deg C	kPag	Deg C	kPa(a)	Liquid	Gas
Acetic Acid	HC2H3O2	60.05	118				1.05	
Acetone	C3H6O	58.08	56		235	4766	0.79	2.01
Air	N2O2	28.97	-194		-141	3772	0.86	1
Alcohol, Ethyl	C2H6O	46.07	78	16	243	6379	0.794	1.59
Alcohol, Methyl	CH4O	32.04	64	32	239	8097	0.796	1.11
Ammonia	NH3	17.03	-33	786	132	11283	0.62	0.59
Ammonium Chloride	NH4CI						1.07	
Ammonium Hydroxide							0.91	
Ammonium Sulphate							1.15	
Beer							1.01	
Aniline	C6H7N	93.12	185		426	5310	1.02	
Argon	A	39.94	-186		-13	4862	1.65	1.38

## **B**

Bromine	Br2	159.8	59		302		2.93	5.52
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<b>C</b>								
Copper Sulphate	CuSO						1.17	
Calcium Chloride	CaCl <sub>2</sub>						1.23	
Carbon Dioxide	CO <sub>2</sub>	44.01	-78	5786	31	7393	0.8	1.52
Carbon Disulphide	CS <sub>2</sub>	76.1	46				1.29	2.63
Carbon Monoxide	CO	28.01	-192		-140	3497	0.8	0.97
Carbon Tetrachloride	CCl <sub>4</sub>	153.8	77		283	4559	1.59	5.31
Chlorine	Cl <sub>2</sub>	70.91	-34	586	144	7717	1.42	2.45
Chromic Acid	H <sub>2</sub> CrO <sub>4</sub>	118					1.21	
Citric Acid	C <sub>6</sub> H <sub>8</sub> O <sub>7</sub>	192.1					1.54	

<b>E</b>								
Ether	(C <sub>2</sub> H <sub>5</sub> ) <sub>2</sub> O	74.12	1				0.74	2.55

<b>F</b>								
Ferric Chloride	FeCl <sub>3</sub>		-18				1.23	
Fluorine	F <sub>2</sub>	38	-187	2069	-129	5579	1.11	1.31
Formaldehyde	H <sub>2</sub> CO	30.03	-21				0.82	1.08
Formic Acid	HCO <sub>2</sub> H	46.03	101				123	
Furfural	C <sub>5</sub> H <sub>4</sub> O <sub>2</sub>	96.08	162				1.16	

<b>G</b>								
Glycol	C <sub>2</sub> H <sub>6</sub> O <sub>2</sub>	62.07	197				1.11	
Glycerine	C <sub>3</sub> H <sub>8</sub> O <sub>3</sub>	92.09	290				1.26	

<b>H</b>								
Helium	He	4.003	-270		-268	228	0.18	0.14
Hydrochloric Acid	HCl	36.47	-82				1.64	
Hydrofluoric Acid	HF	20.01	19	6	230		0.92	
Hydrogen	H <sub>2</sub>	2.016	-252		-240	1297	0.07	0.07
Hydrogen Chloride	HCl	36.47	-82	4228	52	8262	0.86	1.26
Hydrogen Sulphide	H <sub>2</sub> S	34.07	-60	1738	101	9014	0.79	1.17
<b>I</b>								
Isopropyl Alcohol	C <sub>3</sub> H <sub>8</sub> O	60.09	82				0.78	2.08
<b>L</b>								
Linseed Oil			281				0.93	
<b>M</b>								
Magnesium Chloride	MgCl <sub>2</sub>						1.22	
Mercury	Hg	200.6	354				13.6	6.93
Methyl Bromide	CH <sub>3</sub> Br	94.95	3	90	191		1.73	3.27
Methyl Chloride	CH <sub>3</sub> Cl	50.49	-24	407	143	6683	0.99	1.74
<b>N</b>								
Naphtlalene	C <sub>10</sub> H <sub>8</sub>	128.1	218				1.14	4.43
Nitric Acid	HNO <sub>3</sub>	63.02	86				1.5	
Nitrogen	N <sub>2</sub>	28.02	-196		-36	3400	0.81	0.97

<b>O</b>								
Oil, Vegetable							0.92	
Oxygen	O2	32	-183		-17	5083	1.14	1.105
<b>P</b>								
Phosgene	COCl2	98.92	8	74	182	5676	1.39	3.42
Phosphoric Acid	H3PO4	98	213				1.83	
Potassium Carbonate							1.24	
Potassium Chloride	KCl						1.16	
Potassium Hydroxide	KOH						1.24	
<b>R</b>								
Refrigerant 11	CCl3F	137.3	24	92	198	4379		5.04
Refrigerant 12	CCl2F2	120.9	-30	484	112	4117		4.2
Refrigerant 13	CClF3	104.4	-82	3163	29	3869		
Refrigerant 21	CHCl2F	102.9	9	58	178	5172		3.82
Refrigerant 22	CHClF2	86.48	-41	845	96	4938		
Refrigerant 23	CHF3	70.02	-84	4379	33	4766		
<b>S</b>								
Sodium Chloride	NaCl						1.19	
Sodium Hydroxide	NaOH						1.27	
Sodium Sulphate	Na2SO4						1.24	
Sodium Thiosulphate	Na2S2O3						1.23	
Starch	(C6H10O5) <sub>x</sub>						1.5	
Sugar Solutions	C12H22O11						1.1	
Sulphuric Acid	H2SO4	98.08	330				1.83	
Sulphur Dioxide	SO2	64.6	-10	237	158	7897	1.39	2.21

<b>T</b>								
Turpentine			160				0.87	
<b>W</b>								
Water	H2O	18.1	100	7	374	22124	1	0.62
<b>Z</b>								
Zinc Chloride	ZnCl2						1.24	
Zinc Sulphate	ZnSO4						1.31	

### Imperial

Fluid Name	Formula	Molecular Wt	Boiling Point	Vap Pressure	Critical T	Critical P	Specific Gravity	
<b>A</b>			Deg F	psi(g)	Deg F	psi(a)	Liquid	Gas
Acetic Acid	HC2H3O2	60.05	245				1.05	
Acetone	C3H6O	58.08	133		455	691	0.79	2.01
Air	N2O2	28.97	-317		-221	547	0.86	1
Alcohol, Ethyl	C2H6O	46.07	173	2.3	470	925	0.794	1.59
Alcohol, Methyl	CH4O	32.04	148	4.63	463	1174	0.796	1.11
Ammonia	NH3	17.03	-28	114	270	1636	0.62	0.59
Ammonium Chloride	NH4CI						1.07	
Ammonium Hydroxide							0.91	
Ammonium Sulphate							1.15	
Aniline	C6H7N	93.12	365		798	770	1.02	
Argon	A	39.94	-302		8	705	1.65	1.38

<b>B</b>								
Beer							1.01	
Bromine	Br2	159.8	138		575		2.93	5.52
<b>C</b>								
Copper Sulphate	CuSO						1.17	
Calcium Chloride	CaCl						1.23	
Carbon Dioxide	CO2	44.01	-109	839	88	1072	0.8	1.52
Carbon Disulfide	CS2	76.1	115				1.29	2.63
Carbon Monoxide	CO	28.01	-314		-220	507	0.8	0.97
Carbon Tetrachloride	CCl4	153.8	170		542	661	1.59	5.31
Chlorine	Cl2	70.91	-30	85	291	1119	1.42	2.45
Chromic Acid	H2CrO4	118					1.21	
Citric Acid	C6H8O7	192.1					1.54	
<b>E</b>								
Ether	(C2H5)2O	74.12	34				0.74	2.55
<b>F</b>								
Ferric Chloride	FeCl3						1.23	
Fluorine	F2	38	-305	300	-200	809	1.11	1.31
Formaldehyde	H2CO	30.03	-6				0.82	1.08
Formic Acid	HCO2H	46.03	214				1.23	
Furfural	C5H4O2	96.08	324				1.16	

<b>G</b>								
Glycol	C2H6O2	62.07	387				1.11	
Glycerine	C3H8O3	92.09	554				1.26	
<b>H</b>								
Helium	He	4.003	-454		-450	33	0.18	0.14
Hydrochloric Acid	HCl	36.47	-115				1.64	
Hydrofluoric Acid	HF	20.01	66	0.9	446		0.92	
Hydrogen	H2	2.016	-422		-400	188	0.07	0.07
Hydrogen Chloride	HCl	36.47	-115	613	125	1198	0.86	1.26
Hydrogen Sulphide	H2S	34.07	-76	252	213	1307	0.79	1.17
<b>I</b>								
Isopropyl Alcohol	C3H8O	60.09	180				0.78	2.08
<b>L</b>								
Linseed Oil			538				0.93	
<b>M</b>								
Magnesium Chloride	MgCl2						1.22	
Mercury	Hg	200.6	670				13.6	6.93
Methyl Bromide	CH3Br	94.95	38	13	376		1.73	3.27
Methyl Chloride	CH3Cl	50.49	-11	59	290	969	0.99	1.74

<b>N</b>								
Naphthalene	<b>C10H8</b>	<b>128.1</b>	<b>424</b>				<b>1.14</b>	<b>4.43</b>
Nitric Acid	<b>HNO3</b>	<b>63.02</b>	<b>187</b>				<b>1.5</b>	
Nitrogen	<b>N2</b>	<b>28.02</b>	<b>-320</b>		<b>-33</b>	<b>493</b>	<b>0.81</b>	<b>0.97</b>
<b>O</b>								
Oil, Vegetable							<b>0.92</b>	
Oxygen	<b>O2</b>	<b>32</b>	<b>-297</b>		<b>1</b>	<b>737</b>	<b>1.14</b>	<b>1.105</b>
<b>P</b>								
Phosgene	<b>COCl2</b>	<b>98.92</b>	<b>47</b>	<b>10.7</b>	<b>360</b>	<b>823</b>	<b>1.39</b>	<b>3.42</b>
Phosphoric Acid	<b>H3PO4</b>	<b>98</b>	<b>415</b>				<b>1.83</b>	
Potassium Carbonate							<b>1.24</b>	
Potassium Chloride	<b>KCl</b>						<b>1.16</b>	
Potassium Hydroxide	<b>KOH</b>						<b>1.24</b>	
<b>R</b>								
Refrigerant 11	<b>CCl3F</b>	<b>137.3</b>	<b>75</b>	<b>13.4</b>	<b>388</b>	<b>635</b>		<b>5.04</b>
Refrigerant 12	<b>CCl2F2</b>	<b>120.9</b>	<b>-22</b>	<b>70.2</b>	<b>234</b>	<b>597</b>		<b>4.2</b>
Refrigerant 13	<b>CClF3</b>	<b>104.4</b>	<b>-115</b>	<b>458.7</b>	<b>84</b>	<b>561</b>		
Refrigerant 21	<b>CHCl2F</b>	<b>102.9</b>	<b>48</b>	<b>8.4</b>	<b>353</b>	<b>750</b>		<b>3.82</b>
Refrigerant 22	<b>CHClF2</b>	<b>86.48</b>	<b>-41</b>	<b>122.5</b>	<b>205</b>	<b>716</b>		
Refrigerant 23	<b>CHF3</b>	<b>70.02</b>	<b>-119</b>	<b>635</b>	<b>91</b>	<b>691</b>		



