Properties of Flammable Liquids and Gases

Name	Formula	TWA (OSHA PEL)	Flash Point F°		Explosive Limits		Ignition Temp., F°	Specific Gravity	Vapor Density
			Closed Cup	Open Cup	LEL %	UEL %			
1,3- Butadiene	CH_2=CHCH=CH_2	1 ppm	Gas	Gas	2.0	12.0	788	—	1.90
Acetaldehyde	CH_3CHO	200 ppm	-38	.....	4.0	60.0	347	0.78	1.52
Acetic Acid (glacial)	CH_3COOH	10 ppm	103	110	4.0	19.9	867	1.05	2.07
Acetone	CH_3COCH_3	1000 ppm	-4	15	2.5	13.0	869	0.79	2.00
Acetonitrile	CH_3CN	40 ppm	.....	42	3	16	975	0.78	1.42
Acrylonitrile	CH_2=CHCN	2 ppm	30	32	3.0	17.0	898	0.80	1.83
Ammonia (anhydrous)	NH_3	50 ppm	Gas	Gas	15.0	28.0	1204	—	0.60
Amyl acetate-n	$CH_3COO[CH_2]_4CH_3$	100 ppm	77	.....	1.1	7.5	714	0.88	4.49
Amylamine (mono)	$C_5H_{11}NH_2$		30	45	2.2	22	.....	0.75	3.01
Benzene	C_6H_6	1 ppm	12	.....	1.2	7.8	928	0.88	2.77
Butane-n	$CH_3CH_2CH_2CH_3$	—	-76	Gas	1.9	8.5	550	0.60	2.06
Butene-1	CH_3CH_2CH:CH_2	—	Gas	Gas	1.6	10.0	725	—	1.94
Butyl acetate-n	$CH_3COO[CH_2]_3CH_3$	150 ppm	72	98	1.7	7.6	797	0.88	4.00
Butyl alcohol-n	$CH_3CH_2CH_2CH_2OH$	100 ppm	98	110	1.4	11.2	650	0.81	2.55
Butyl alcohol-sec	$CH_3CH(OH)CH_2CH_3$	150 ppm	75	85	1.7 @ 212°F	9.8 @ 212°F	761	0.81	2.55
Butyl alcohol-tert	$(CH_3)_3COH$	100 ppm	52	60	2.4	8.0	892	0.79	2.55
Cyclohexane	C_6H_{12}	300 ppm	-4	.....	1.3	8	473	0.80	2.90
Decane-n	$CH_3(CH_2)_8CH_3$	—	115	.....	0.8	5.4	410	0.70	4.90
Diethyl ether	$C_2H_5OC_2H_5$	400 ppm	-49	.....	1.9	36.0	356	0.72	2.55
Dimethylformamide	$HCON(CH_3)_2$	10 ppm	136	155	2.2 @ 212° F	15.2	833	0.90	2.52
Dimethylamine, anhydrous	$(CH_3)_2NH$	10 ppm	Gas	Gas	2.8	14.4	752	—	1.60
Dioxane-p	$C_4H_8O_2$	100 ppm	54	65	2	22	356	1.0+	3.00
Dodecane-n	$CH_3(CH_2)_{10}CH_3$	—	165	.....	0.6	.....	397	0.75	5.86
Ethane	CH_3CH_3	—	Gas	Gas	3.0	12.5	882	.....	1.04
Ethyl alcohol	CH_3CH_2OH	1000 ppm	55	71	3.3	19.0	685	0.79	1.59
Ethyl benzene	$CH_3CH_2C_6H_5$	100 ppm	70	75	0.8	6.7	810	0.87	3.66
Ethyl ether	$C_2H_5OC_2H_5$	400 ppm	-49	.....	1.9	36.0	356	0.72	2.55
Ethylamine	$CH_3CH_2NH_2$	10 ppm	1	.....	3.5	14.0	725	0.80	1.60
Ethylene	H_2C:CH_2	—	Gas	Gas	2.7	36.0	842		0.98
Ethylene oxide	C_2H_4O	1 ppm	-20	-4	3.0	100.0	1058	0.89	1.52
Formaldehyde gas	HCHO	.75 ppm	Gas	Gas	7.0	73.0	795	.....	1.00
Gasoline, aviation-commercial	—	.....	-50	.....	1.3	7.1	824	.....	.....
Gasoline, aviation-military	—	.....	-50	.....	1.2	7.1	880	.....	.....
Heptane-n	$CH_3[CH_2]_5CH_3$	500 ppm	25	30	1.1	6.7	399	0.70	3.50
Hexane-n	$CH_3[CH_2]_4CH_3$	500 ppm	-7	-14	1.1	7.5	437	0.70	3.00
Hydrogen	H_2	—	Gas	Gas	4.0	75.0	932	.....	0.10

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			Closed Cup	Open Cup	LEL %	UEL %			
Isoprene	CH_2:C[CH_3]CH:CH_2	——	-65	.....	1.5	8.9	743	0.70	2.40
Isopropyl alcohol	[CH_3]$_2$CHOH	400 ppm	53	60	2.0	12.7 @ 200°F	750	0.79	2.07
Isopropyl ether	[CH_3]$_2$CHOCH[CH_3]$_2$	500 ppm	-18	-15	1.4	7.9	830	0.73	3.52
Isopropylamine	[CH_3]$_2$CHNH_2	5 ppm	——	-35	——	——	756	0.69	2.00
"Jet fuel, JP-4"			-10 to +30	.....	1.3	8.0	464	——	——
Methane	CH_4		Gas	Gas	5.0	15.0	999	.....	0.55
Methyl alcohol	CH_3OH	200 ppm	52	54	6.0	36.0	867	0.79	1.11
Methyl ethyl ketone	$CH_3COCH_2CH_3$	200 ppm	16	24	1.4 @ 200°F	11.4 @ 200°F	759	0.81	2.48
Methyl methacrylate	CH_2=C(CH_3)$COOCH_3$	100 ppm	50	50	1.7	8.2	.....	0.94	3.60
Naphtha		100 ppm	-57	.....	1.1	5.9	550	0.60	2.5
Octane-n	$CH_3(CH_2)_6CH_3$	500 ppm	56	.....	1.0	6.5	403	0.70	3.86
Pentane-n	$CH_3(CH_2)_3CH_3$	1000 ppm	-57	.....	1.5	7.8	500	0.63	2.48
Propane	$CH_3CH_2CH_3$	1000 ppm	Gas	Gas	2.1	9.5	842	—-	1.56
Propyl acetate-n	$CH_3COOCH_2CH_2CH_3$	200 ppm	55	70	1.7 @ 100°F	8.0	842	0.89	3.52
Propyl alcohol-iso	[CH_3]$_2$CHOH	400 ppm	53	60	2.0	12.7 @ 200°F	750	0.79	2.07
Propyl alcohol-n	$CH_3CH_2CH_2OH$	200 ppm	74	77	2.2	13.7	775	0.80	2.07
Propylamine-n	$CH_3(CH_2)_2NH_2$	—-	-35	.....	2.0	10.4	604	0.72	2.03
Propylbenzene-n	$C_3H_7C_6H_5$	—-	86	.....	0.8	6	842	0.90	4.14
Propylene	CH_2:$CHCH_3$	—-	Gas	Gas	2.0	11.1	851	—-	1.49
Propylene oxide	C_3H_6O	100 ppm	-35	.....	2.3	36.0	840	0.83	2.00
Styrene	C_6H_5CH=CH_2	100 ppm	88	100	0.9	6.8	914	0.91	3.60
Tetradecane-n	$CH_3(CH_2)_{12}CH_3$	—-	212	.....	0.5	.....	392	0.77	6.83
Tetrahydrofuran	C_4H_8O	200 ppm	6	.....	2.0	11.8	610	0.89	2.50
Tetrahydrofurfuryl alcohol	$C_4H_7OCH_2OH$	—-	167	167	1.5	9.7	540	1.06	3.52
Toluene	$C_6H_5CH_3$	200 ppm	40	45	1.1	7.1	896	0.87	3.14
Triethylamine	(C_2H_5)$_3$N	25 ppm	—-	16	1.2	8.0	480	0.73	3.48
Trimethylamine	(CH_3)$_3$N	—-	Gas	Gas	2.0	11.6	374	—-	2.03
Vinyl acetate	CH_2=$CHOOCCH_3$	—-	18	30	2.6	13.4	756	0.90	2.97
Vinyl Chloride	CH_2=CHCl	1 ppm		-108.4	3.6	33.0	882	0.91	2.20
Vinyl ethyl ether	CH_2=$CHOC_2H_5$	—-	<-50	.....	1.7	28.0	395	0.75	2.50
Xylene-m	C_6H_4(CH_3)$_2$	100 ppm	81	.....	1.1	7.0	982	0.87	3.66
Xylene-o	C_6H_4(CH_3)$_2$	100 ppm	90	.....	0.9	6.7	867	0.89	3.66
Xylene-p	C_6H_4(CH_3)$_2$	100 ppm	81	.....	1.1	7.0	984	0.87	3.66