INFLUENCE OF PRESSURE ON FREEZING POINTS

This table illustrates the variation of the freezing point of representative types of liquids with pressure. Substances are listed in alphabetical order. Note that 1 MPa = 0.01 kbar = 9.87 atm.

REFERENCES

1. Isaacs, N.S., *Liquid Phase High Pressure Chemistry*, John Wiley, New York, 1981.
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Substance	Molecular formula	Freezing point in °C at:		
		0.1 MPa	100 MPa	1000 MPa
Acetic acid	$C_2H_4O_2$	16.6	37	
Acetophenone	C_8H_8O	20.0	41.2	
Aniline	C_6H_7N	–6.0	13.5	140
Benzene	C_6H_6	5.5	33.4	
Benzonitrile	C_7H_5N	–12.8	7.6	
Benzyl alcohol	C_7H_8O	–15.2	0.2	
Bromobenzene	C_6H_5Br	–30.6	–12	108
Bromoethane	C_2H_5Br	–118.6	–108	
1-Bromonaphthalene	$C_{10}H_7Br$	–1.8	6.1	
1-Bromopropane	C_3H_7Br	–110	–98	
p-Bromotoluene	C_7H_7Br	28.0	56.7	
Butanoic acid	$C_4H_8O_2$	–5.7	13.8	
1-Butanol	$C_4H_{10}O$	–89.8	–77.2	
Carbon disulfide	CS_2	–111.5	–98	
Chlorobenzene	C_6H_5Cl	–45.2	–28	84
p-Chlorotoluene	C_7H_7Cl	6.9	33.1	
o-Cresol	C_7H_8O	29.8	47.7	
m-Cresol	C_7H_8O	11.8	25.6	
p-Cresol	C_7H_8O	35.8	56.2	
Cyclohexane	C_6H_{12}	6.6	32.5	
Cyclohexanol	$C_6H_{12}O$	25.5	62.3	
1,2-Dibromoethane	$C_2H_4Br_2$	9.9	34.0	
p-Dichlorobenzene	$C_6H_4Cl_2$	52.7	79.1	
Dichloromethane	CH_2Cl_2	–95.1	–83	
N,*N*-Dimethylaniline	$C_8H_{11}N$	2.5	26.3	
1,4-Dioxane	$C_4H_8O_2$	11	23	
Ethanol	C_2H_6O	–114.1	–108	
Formamide	CH_3NO	–15.5	10.8	
Formic acid	CH_2O_2	8.3	20.6	
Furan	C_4H_4O	–85.6	–73	
Hexamethyldisiloxane	$C_6H_{18}OSi_2$	–66	–37	
Menthol	$C_{10}H_{20}O$	42	60	
Methyl benzoate	$C_8H_8O_2$	–15	31.8	
2-Methyl-2-butanol	$C_5H_{12}O$	–8.8	13.4	
2-Methyl-2-propanol	$C_4H_{10}O$	25.4	58.1	
Naphthalene	$C_{10}H_8$	78.2	115.7	
Nitrobenzene	$C_6H_5NO_2$	5.7	13.5	
m-Nitrotoluene	$C_7H_7NO_2$	15.5	40.6	
Pentachloroethane	C_2HCl_5	–29.0	–6.3	
Potassium	K	63.7	78	170
Potassium chloride	ClK	771		945
Propanoic acid	$C_3H_6O_2$	–20.7	–1.2	
Silver chloride	AgCl	455		545
Sodium	Na	97.8	106	167
Sodium chloride	ClNa	800.7		997
Sodium fluoride	FNa	996		1115
Tetrachloromethane	CCl_4	–23.0	14.2	
Tribromomethane	$CHBr_3$	8.1	31.5	
Trichloromethane	$CHCl_3$	–63.6	–45.2	
Water	H_2O	0.0	–9.0	
o-Xylene	C_8H_{10}	–25.2	–3.5	
m-Xylene	C_8H_{10}	–47.8	–25.2	
p-Xylene	C_8H_{10}	13.2	46.0	