6/11/71
K. E. B

Handbook of Chemistry & Physics

51st Edition
1970-1971

ref.	Biphenyl	mw	mp (°C)	bp (°C)	Density	n	ref
2214	o 2 chloro	188.66	34	274	$1.1499^{32.5}$		B 5^2, 483
"	m 3 chloro	"	16	284.5	$1.1579^{25/4}$	1.6181^{25}	"
"	p 4 chloro	"	77.7	291			"
			λ 203(4.61)	180-			
			253(4.32)	95^{20-30}			
	4,4' dichloro	223.11 ~~312.03~~	148-9 ~~164~~	315-9 ~~355.60~~			B 5^2, 485

Van Der Waal's Constants for Gases

Biphenyl

$$\left(P + \frac{a}{V^2}\right)(V - b) = RT \text{ for 1 mole}$$

a	b
$\frac{(\text{liters})^2 \times \text{atm}}{(\text{moles})^2}$	$\frac{\text{liters}}{\text{mole}}$
52.79	0.2480

Vapor Pressure, Critical Temperature & Critical Pressure of Organic Compounds

$$\log_{10} P = (-0.2185\, A/K) + B$$

P is the pressure expressed in Torrs
K is the temperature expressed in degrees Kelvin
A molar heat of vaporization in cal/gm mole
Critical temperature are given in degrees Celcius and atm

FORMULA	NAME	A	B	RANGE	T_c °C	P_c ATM
CH_2O	FORMIC ACID	9896.5	8.779337	-20-100.6		
$C_{12}H_9Cl$	2-chlorobiphenyl	13925.7	8.484380	89.3-267.5		
	4- " "	14017.4	8.300143	96.4-292.9		

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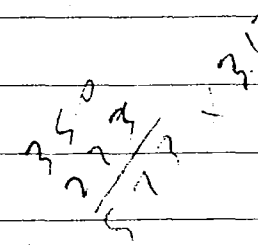
Viscosity of Liquids

Liquid	Temp °C	Viscosity cp
Diphenyl	70	1.49
	100	.97

Azeotrope

	BP	BP	% COMP In azo	UPPER	LOWER	RELATIVE VOL	SPCR
a) Benzene	80.1	69.4	91.1	99.99	0.09	U 92.0	U 0.88
b) Water	100		8.9	.06	99.93	L 8.0	L .99
a FORMIC ACID	100.7	107.1	77.5				
b WATER	100.0		22.5				
a FORMIC ACID	100.7	85.8	50				
b TOLUENE	110.6		50				
a FORMIC ACID	100.7	97.5	40.4				
b m XYLENE	139.0		49.0				
c WATER	100.0		10.6				

350
273
577



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