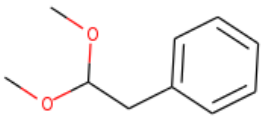
Benzene, (2,2-dimethoxyethyl)-

Other names: (2,2-Dimethoxyethyl)benzene; 1,1-Dimethoxy-2-phenylethane; 2,2-Dimethoxy-1-phenylethane; 2-Phenylacetaldehyde dimethyl acetal; Acetaldehyde, phenyl-, dimethyl acetal; Ethane, 1,1-dimethoxy-2-phenyl-; Hyscylene P; NSC 5174; Phenacetaldehyde dimethyl acetal; Phenylacetaldehyde dimethyl acetal; Phenylacetic aldehyde dimethyl acetal; Viridine; Viridine [benzene (2,2-di-methoxy ethyl)]; «alpha»-Tolylaldehyde dimethyl acetal.



InChI: InChI=1S/C10H14O2/c1-11-10(12-2)8-9-6-4-3-5-7-9/h3-7,10H,8H2,1-2H3

InChI Key: WNJSKZBEWNVKGU-UHFFFAOYSA-N

Formula: C10H14O2

SMILES: COC(Cc1ccccc1)OC

Molecular Weight: 166.22

CAS: 101-48-4

Physical Properties

Property	Value	Unit	Source
$\Delta_f G°$	-66.71	kJ/mol	Joback Method
$\Delta_f H°_{gas}$	-282.92	kJ/mol	Joback Method
$\Delta_{fus} H°$	14.55	kJ/mol	Joback Method
$\Delta_{vap} H°$	44.56	kJ/mol	Joback Method
$logP_{oct/wat}$	1.85		Crippen Method
P_c	2850.52	kPa	Joback Method
T_{boil}	493.20	K	NIST Webbook
T_c	705.36	K	Joback Method
T_{fus}	258.34	K	Joback Method
V_c	0.52	m^3/kg-mol	Joback Method

Temperature Dependent Properties

Property	Value	Unit	Temperature (K)	Source
$C_{p,gas}$	305.86	J/mol×K	499.28	Joback Method

Property	Value	Unit	Temperature (K)	Source
η	0.00	Pa×s	499.28	Joback Method

Sources

Joback Method: https://en.wikipedia.org/wiki/Joback_method
NIST Webbook: http://webbook.nist.gov/cgi/inchi/InChI=1S/C10H14O2/c1-11-10(12-2)8-9-6-4-3-5-7-9/h3-7,10H,8H2,1-2H3
Crippen Method: http://pubs.acs.org/doi/abs/10.1021/ci990307l

Legend

$\mathbf{C_{p,gas}}$: Ideal gas heat capacity (J/mol×K).
η: Dynamic viscosity (Pa×s).
$\Delta_f\mathbf{G°}$: Standard Gibbs free energy of formation (kJ/mol).
$\Delta_f\mathbf{H°_{gas}}$: Enthalpy of formation at standard conditions (kJ/mol).
$\Delta_{fus}\mathbf{H°}$: Enthalpy of fusion at standard conditions (kJ/mol).
$\Delta_{vap}\mathbf{H°}$: Enthalpy of vaporization at standard conditions (kJ/mol).
$\boldsymbol{log}\mathbf{P_{oct/wat}}$: Octanol/Water partition coefficient .
$\mathbf{P_c}$: Critical Pressure (kPa).
$\mathbf{T_{boil}}$: Normal Boiling Point Temperature (K).
$\mathbf{T_c}$: Critical Temperature (K).
$\mathbf{T_{fus}}$: Normal melting (fusion) point (K).
$\mathbf{V_c}$: Critical Volume (m^3/kg-mol).