

HO[CH₂CH₂O]₅H

Other names: 2-[2-[2-[2-(2-Hydroxyethoxy)ethoxy]ethoxy]ethoxy]ethanol; 3,6,9,12-Tetraoxatetradecane-1,14-diol; HO[CH₂CH₂O]₅H; Pentaglycol.

InChI: InChI=1S/C10H22O6/c11-1-3-13-5-7-15-9-10-16-8-6-14-4-2-12/h11-12H,1-10H2

InChI Key: JLFNLZLINWHATN-UHFFFAOYSA-N

Formula: C₁₀H₂₂O₆

SMILES: OCCOCCOCCOCCOCCO

Molecular Weight: 238.28

CAS: 4792-15-8



Physical Properties

Property	Value	Unit	Source
$\Delta_f G^\circ$	-660.32	kJ/mol	Joback Method
$\Delta_f H^\circ_{\text{gas}}$	-1083.07	kJ/mol	Joback Method
$\Delta_{\text{fus}} H^\circ$	34.58	kJ/mol	Joback Method
$\Delta_{\text{vap}} H^\circ$	80.85	kJ/mol	Joback Method
$\log P_{\text{oct/wat}}$	-0.963		Crippen Method
P_c	2351.92	kPa	Joback Method
T_{boil}	702.24	K	Joback Method
T_c	751.00 ± 20.00	K	NIST Webbook
T_{fus}	264.45 ± 0.70	K	NIST Webbook
V_c	0.706	m ³ /kg-mol	Joback Method

Temperature Dependent Properties

Property	Value	Unit	Temperature (K)	Source
$C_{p,\text{gas}}$	547.05	J/mol×K	702.24	Joback Method
$C_{p,\text{liquid}}$	515.50	J/mol×K	298.0	NIST Webbook
η	0.0000061	Paxs	702.24	Joback Method

Sources

Joback Method: https://en.wikipedia.org/wiki/Joback_method

NIST Webbook: <http://webbook.nist.gov/cgi/inchi/InChI=1S/C10H22O6/c11-1-3-13-5-7-15-9-10-16-8-6-14-4-2-12/h11-12H,1-10H2>

Crippen Method: <http://pubs.acs.org/doi/abs/10.1021/ci9903071>

Legend

$C_{p,gas}$: Ideal gas heat capacity (J/mol×K).

$C_{p,liquid}$: Liquid phase heat capacity (J/mol×K).

η : Dynamic viscosity (Pa×s).

$\Delta_f G^\circ$: Standard Gibbs free energy of formation (kJ/mol).

$\Delta_f H^\circ_{gas}$: Enthalpy of formation at standard conditions (kJ/mol).

$\Delta_{fus} H^\circ$: Enthalpy of fusion at standard conditions (kJ/mol).

$\Delta_{vap} H^\circ$: Enthalpy of vaporization at standard conditions (kJ/mol).

$logP_{oct/wat}$: Octanol/Water partition coefficient .

P_c : Critical Pressure (kPa).

T_{boil} : Normal Boiling Point Temperature (K).

T_c : Critical Temperature (K).

T_{fus} : Normal melting (fusion) point (K).

V_c : Critical Volume (m³/kg-mol).

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