

Malonic acid, decyl 3-methylpentyl ester

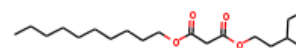
InChI: InChI=1S/C19H36O4/c1-4-6-7-8-9-10-11-12-14-22-18(20)16-19(21)23-15-13-17(3)5-2/h17H,4-16H2,1-3H3

InChI Key: WIKNTIKVZSFCLQ-UHFFFAOYSA-N

Formula: C19H36O4

SMILES: CCCCCCCCCOC(=O)CC(=O)OCCC(C)CC

Molecular Weight: 328.49



Physical Properties

Property	Value	Unit	Source
$\Delta_f G^\circ$	-361.18	kJ/mol	Joback Method
$\Delta_f H^\circ_{\text{gas}}$	-930.37	kJ/mol	Joback Method
$\Delta_{\text{fus}} H^\circ$	47.02	kJ/mol	Joback Method
$\Delta_{\text{vap}} H^\circ$	75.81	kJ/mol	Joback Method
$\log P_{\text{oct/wat}}$	5.04		Crippen Method
P_c	1155.35	kPa	Joback Method
T_{boil}	786.26	K	Joback Method
T_c	968.16	K	Joback Method
T_{fus}	433.21	K	Joback Method
V_c	1.14	m ³ /kg-mol	Joback Method

Temperature Dependent Properties

Property	Value	Unit	Temperature (K)	Source
$C_{p,\text{gas}}$	909.39	J/mol×K	786.26	Joback Method
η	0.00	Paxs	786.26	Joback Method

Sources

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

NIST Webbook: [http://webbook.nist.gov/cgi/inchi/InChI=1S/C19H36O4/c1-4-6-7-8-9-10-11-12-14-22-18\(20\)16-19\(21\)23-15-13-17\(3\)5-2/h17H,4-16H2,1-3H3](http://webbook.nist.gov/cgi/inchi/InChI=1S/C19H36O4/c1-4-6-7-8-9-10-11-12-14-22-18(20)16-19(21)23-15-13-17(3)5-2/h17H,4-16H2,1-3H3)

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

Legend

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

η : Dynamic viscosity (Pa \times 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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