Cyclohexanol, 5-methyl-2-(1-methylethyl)-, (1«alpha»,2«beta»,5«alpha»)-

Other names: Menthol, cis-1,3,trans-1,4-
Hexahydrothymol
Menthacamphor
Menthol
Menthomenthol
Peppermint camphor
dl-Menthol
p-Menthan-3-ol
Cyclohexanol, 2-isopropyl-5-methyl-
NCI-C50000
5-Methyl-2-(1-methylethyl)cyclohexanol
2-Isopropyl-5-methylcyclohexanol
l-Menthol
3-p-Menthanol
5«alpha»-Methyl-2«beta»-(1«alpha»-methylethyl)cyclohexanol
component of Dermoplast
Fancol menthol
Fisherman's friend lozenges
Menthol terpine hydrate
component of Minut-rub
Racemic menthol
component of Robitussin cough drops
component of Sarna
component of Theragesic
Therapeutic mineral ice
Cyclohexanol, 2-isopropyl-5-methyl-, (1«alpha»,2«beta»,5«alpha»)-
2-Isopropyl-5-methylcyclohexanol, (1«alpha»,2«beta»,5«alpha»)-
5-Methyl-2-(1-methylethyl)cyclohexanol, (1«alpha»,2«beta»,5«alpha»)-
(.+/-.)-Menthol
Cyclohexanol, 5-methyl-2-(1-methylethyl)-, (1R,2S,5R)-rel-
NSC 2603
Racementhol
rac-Menthol
Diterpene
Cyclohexanol, 5-methyl-2-(1-methylethyl)-, (1«alpha»,2«beta»,5«alpha»)-(.+/-.)-

Inchi: InChI=1S/C10H20O/c1-7(2)9-5-4-8(3)6-10(9)11/h7-11H,4-6H2,1-3H3/t8-,9+,10-/m1/s1

InchiKey: NOOLISFMXDJSKH-KXUCPTDWSA-N

Formula: C10H20O

SMILES: CC1CCC(C(C)C)C(O)C1

Mol. weight [g/mol]: 156.27

CAS: 15356-70-4

Physical Properties

Property code	Value	Unit	Source
gf	-96.91	kJ/mol	Joback Method
hf	-393.60	kJ/mol	Joback Method
hfus	16.20	kJ/mol	Joback Method
hvap	53.96	kJ/mol	Joback Method
log10ws	-2.55		Crippen Method
logp	2.440		Crippen Method
mcvol	146.770	ml/mol	McGowan Method
pc	2659.77	kPa	Joback Method
tb	530.15	K	Joback Method
tc	719.67	K	Joback Method
tf	247.18	K	Joback Method
vc	0.539	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	370.36	J/mol×K	530.15	Joback Method
cpg	387.84	J/mol×K	561.74	Joback Method
cpg	404.52	J/mol×K	593.32	Joback Method
cpg	420.40	J/mol×K	624.91	Joback Method
cpg	435.50	J/mol×K	656.49	Joback Method
cpg	449.82	J/mol×K	688.08	Joback Method
cpg	463.40	J/mol×K	719.67	Joback Method
dvisc	0.0430815	Pa×s	247.18	Joback Method
dvisc	0.0077902	Pa×s	294.34	Joback Method
dvisc	0.0022592	Pa×s	341.50	Joback Method
dvisc	0.0008847	Pa×s	388.66	Joback Method
dvisc	0.0004244	Pa×s	435.83	Joback Method
dvisc	0.0002350	Pa×s	482.99	Joback Method
dvisc	0.0001446	Pa×s	530.15	Joback Method

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	376.70	K	1.00	NIST Webbook

Sources

Joback Method:	https://en.wikipedia.org/wiki/Joback_method
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C15356704&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws

Legend

cpg:	Ideal gas heat capacity
dvisc:	Dynamic viscosity
gf:	Standard Gibbs free energy of formation
hf:	Enthalpy of formation at standard conditions
hfus:	Enthalpy of fusion at standard conditions
hvap:	Enthalpy of vaporization at standard conditions
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
pc:	Critical Pressure
tb:	Normal Boiling Point Temperature
tbrp:	Boiling point at reduced pressure
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume