

Tetra-N-butylammonium bromide

Other names:

1-Butanaminium, N,N,N-tributyl-, bromide
N,N,N-tributyl-1-butanaminium bromide
N-butyl-N,N-bis(1-methylpropyl)-1-butanaminium bromide
TBAB
di-n-butyl-di-sec-butylammonium bromide
tetrabutylammonium bromide

Inchi: InChI=1S/C16H36N.BrH/c1-5-9-13-17(14-10-6-2,15-11-7-3)16-12-8-4;/h5-16H2,1-4H3;1H

InchiKey: JRMUNVKIHCOMHV-UHFFFAOYSA-M

Formula: C16H36BrN

SMILES: CCCC[N+](CCCC)(CCCC)CCCC.[Br-]

Mol. weight [g/mol]: 322.37

CAS: 1643-19-2

Physical Properties

Property code	Value	Unit	Source
hf	-540.30 ± 3.20	kJ/mol	NIST Webbook
tf	395.00 ± 1.00	K	NIST Webbook
tf	395.00 ± 0.50	K	NIST Webbook

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cps	447.80	J/molxK	298.00	NIST Webbook
cps	412.00	J/molxK	298.15	NIST Webbook
hfust	16.15	kJ/mol	395.00	NIST Webbook
sfust	40.89	J/molxK	395.00	NIST Webbook

Sources

Vapor Pressure Osmometry <https://www.doi.org/10.1021/je400821q>
Determination of the Osmotic and
X-ray Crystallographic Properties of the Aqueous
Solutions of Symmetrical Tetraalkyl
Ammonium Halides and Bromide +
(tetra-n-butylammonium bromide +
water) systems: Experimental
measurements and correlations: <https://www.doi.org/10.1016/j.jct.2009.06.014>

Thermal Expansion and Structure of
1,3-Dimethylurea, Tetramethylurea, and
Tetraethylammonium Bromide
for Parent Molar Volumes and
Compressibilities Derived from
Density Measurements
organic solvents:
Volumetric Analysis of Structural
Changes of Cationic Micelles in the
Presence of Quaternary Ammonium
Salts:

<https://www.doi.org/10.1021/je900164a>

<https://www.doi.org/10.1016/j.jct.2011.01.005>

<http://webbook.nist.gov/cgi/cbook.cgi?ID=C1643192&Units=SI>

<https://www.doi.org/10.1021/acs.jced.6b00332>

Legend

cps:	Solid phase heat capacity
hf:	Enthalpy of formation at standard conditions
hfust:	Enthalpy of fusion at a given temperature
sfust:	Entropy of fusion at a given temperature
tf:	Normal melting (fusion) point

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