

ARSENIC TRICHLORIDE

Other names:	Arsenic butter
	Arsenic chloride
	Arsenic chloride (AsCl3)
	Arsenic(3+) chloride
	Arsenic(III) chloride
	Arsenious chloride
	Arsenous chloride
	Arsenous trichloride
	AsCl3
	Butter of arsenic
	Chlorure arsenieux
	Chlorure d'arsenic
	Fuming liquid arsenic
	Trichloroarsine
	Trichlorure d'arsenic
	UN 1560
Inchi:	InChI=1S/AsCl3/c2-1(3)4
InchiKey:	OEYOHULQRFXULB-UHFFFAOYSA-N
Formula:	AsCl3
SMILES:	Cl[As](Cl)Cl
Mol. weight [g/mol]:	181.28
CAS:	7784-34-1

Physical Properties

Property code	Value	Unit	Source
ie	11.20 ± 0.10	eV	NIST Webbook
ie	11.60 ± 0.05	eV	NIST Webbook
ie	10.57 ± 0.03	eV	NIST Webbook
ie	10.55 ± 0.03	eV	NIST Webbook
ie	10.72 ± 0.07	eV	NIST Webbook
ie	11.70 ± 0.10	eV	NIST Webbook
ie	10.90	eV	NIST Webbook
logp	1.688		Crippen Method
tc	653.00 ± 2.00	K	NIST Webbook
vc	0.247 ± 0.005	m3/kmol	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.51356e+01
Coeff. B	-3.84552e+03
Coeff. C	-3.75100e+01
Temperature range (K), min.	261.75
Temperature range (K), max.	403.15

Sources

The Yaws Handbook of Vapor
Pressure:
NIST Webbook:

<https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure>

<http://webbook.nist.gov/cgi/cbook.cgi?ID=C7784341&Units=SI>

Crippen Method:

<http://pubs.acs.org/doi/abs/10.1021/ci990307l>

Crippen Method:

https://www.cheméo.com/doc/models/crippen_log10ws

Cheméo Relay (1.0):

Cheméo Relay (1.0, beta):

Legend

ie: Ionization energy
logp: Octanol/Water partition coefficient
pvap: Vapor pressure
tc: Critical Temperature
vc: Critical Volume

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