

Trimethylaluminum

Other names:	(CH ₃) ₃ Al Aluminum, trimethyl- Trimethylalane Trimethylaluminium UN 1103
Inchi:	InChI=1S/3CH ₃ .Al/h3*1H3;
InchiKey:	JLTRXTDYQLMHGR-UHFFFAOYSA-N
Formula:	C ₃ H ₉ Al
SMILES:	C[AlH ₃](C)C
Mol. weight [g/mol]:	72.09
CAS:	75-24-1

Physical Properties

Property code	Value	Unit	Source
chl	-3184.40 ± 9.60	kJ/mol	NIST Webbook
hf	-86.50 ± 4.80	kJ/mol	NIST Webbook
hf	-57.00 ± 9.70	kJ/mol	NIST Webbook
hf	-88.70	kJ/mol	NIST Webbook
hfl	-149.70 ± 4.50	kJ/mol	NIST Webbook
hfl	-120.20 ± 9.60	kJ/mol	NIST Webbook
hfl	-151.90	kJ/mol	NIST Webbook
hvap	63.20 ± 1.70	kJ/mol	NIST Webbook
ie	9.09 ± 0.26	eV	NIST Webbook
ie	9.76	eV	NIST Webbook
sl	209.41	J/mol×K	NIST Webbook
tt	288.43 ± 0.02	K	NIST Webbook

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpl	155.60	J/mol×K	298.15	NIST Webbook
hfust	8.79	kJ/mol	288.43	NIST Webbook
hfust	8.79	kJ/mol	288.40	NIST Webbook
hfust	8.79	kJ/mol	288.40	NIST Webbook

hsubt	60.10	kJ/mol	264.00	NIST Webbook
hvapt	43.00	kJ/mol	290.50	NIST Webbook
hvapt	39.80	kJ/mol	368.00	NIST Webbook
sfust	30.48	J/mol×K	288.43	NIST Webbook

Sources

NIST Webbook:

<http://webbook.nist.gov/cgi/cbook.cgi?ID=C75241&Units=SI>

Legend

chl:	Standard liquid enthalpy of combustion
cpl:	Liquid phase heat capacity
hf:	Enthalpy of formation at standard conditions
hfl:	Liquid phase enthalpy of formation at standard conditions
hfust:	Enthalpy of fusion at a given temperature
hsubt:	Enthalpy of sublimation at a given temperature
hvap:	Enthalpy of vaporization at standard conditions
hvapt:	Enthalpy of vaporization at a given temperature
ie:	Ionization energy
sfust:	Entropy of fusion at a given temperature
sl:	Liquid phase molar entropy at standard conditions
tt:	Triple Point Temperature

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