

Triethylaluminum

Other names: TEA; Triethylaluminium; Triethylaluminum; UN 1102.

InChI: InChI=1S/3C2H5.Al/c3*1-2;/h3*1H2,2H3;

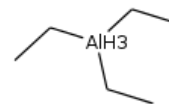
InChI Key: VOITXYVAKOUIBA-UHFFFAOYSA-N

Formula: C₆H₁₅Al

SMILES: CC[AlH3](CC)CC

Molecular Weight: 114.16

CAS: 97-93-8



Physical Properties

Property	Value	Unit	Source
$\Delta_c H^\circ_{\text{liquid}}$	-5105.70 ± 2.90	kJ/mol	NIST Webbook
$\Delta_c H^\circ_{\text{liquid}}$	-5125.40 ± 8.80	kJ/mol	NIST Webbook
$\Delta_f H^\circ_{\text{gas}}$	-114.10 ± 5.50	kJ/mol	NIST Webbook
$\Delta_f H^\circ_{\text{gas}}$	-98.90 ± 6.80	kJ/mol	NIST Webbook
$\Delta_f H^\circ_{\text{gas}}$	-163.70 ± 3.70	kJ/mol	NIST Webbook
$\Delta_f H^\circ_{\text{gas}}$	-144.00 ± 9.10	kJ/mol	NIST Webbook
$\Delta_f H^\circ_{\text{gas}}$	-100.00 ± 5.10	kJ/mol	NIST Webbook
$\Delta_f H^\circ_{\text{liquid}}$	-187.30 ± 5.10	kJ/mol	NIST Webbook
$\Delta_f H^\circ_{\text{liquid}}$	-172.10 ± 6.50	kJ/mol	NIST Webbook
$\Delta_f H^\circ_{\text{liquid}}$	-236.90 ± 3.10	kJ/mol	NIST Webbook
$\Delta_f H^\circ_{\text{liquid}}$	-217.20 ± 8.90	kJ/mol	NIST Webbook
$\Delta_f H^\circ_{\text{liquid}}$	-173.20 ± 4.60	kJ/mol	NIST Webbook
$\Delta_{\text{vap}} H^\circ$	73.20 ± 2.10	kJ/mol	NIST Webbook
S°_{liquid}	308.00	J/mol×K	NIST Webbook
S°_{liquid}	307.80	J/mol×K	NIST Webbook
T_{boil}	466.00 ± 1.00	K	NIST Webbook
T_{triple}	225.00 ± 0.02	K	NIST Webbook

Temperature Dependent Properties

Property	Value	Unit	Temperature (K)	Source
$C_{p,liquid}$	239.00	J/mol×K	298.15	NIST Webbook
$C_{p,liquid}$	239.00	J/mol×K	298.15	NIST Webbook
$\Delta_{fus}H$	10.60	kJ/mol	225.0	NIST Webbook
$\Delta_{fus}H$	10.60	kJ/mol	225.0	NIST Webbook
$\Delta_{fus}H$	10.60	kJ/mol	225.0	NIST Webbook
$\Delta_{fus}H$	10.60	kJ/mol	225.0	NIST Webbook
$\Delta_{fus}S$	47.11	J/mol×K	225.0	NIST Webbook
$\Delta_{fus}S$	47.11	J/mol×K	225.0	NIST Webbook

Sources

NIST Webbook: http://webbook.nist.gov/cgi/inchi/InChI=1S/3C2H5.Al/c3*1-2;/h3*1H2,2H3;

Legend

$\Delta_c H^\circ_{liquid}$: Standard liquid enthalpy of combustion (kJ/mol).

$C_{p,liquid}$: Liquid phase heat capacity (J/mol×K).

$\Delta_f H^\circ_{gas}$: Enthalpy of formation at standard conditions (kJ/mol).

$\Delta_f H^\circ_{liquid}$: Liquid phase enthalpy of formation at standard conditions (kJ/mol).

$\Delta_{fus}H$: Enthalpy of fusion at a given temperature (kJ/mol).

$\Delta_{vap}H^\circ$: Enthalpy of vaporization at standard conditions (kJ/mol).

$\Delta_{fus}S$: Entropy of fusion at a given temperature (J/mol×K).

S°_{liquid} : Liquid phase molar entropy at standard conditions (J/mol×K).

T_{boil} : Normal Boiling Point Temperature (K).

T_{triple} : Triple Point Temperature (K).

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