Molybdenum hexacarbonyl

Other names:	Molybdenum carbonyl (Mo(CO)6), (OC-6-11)-
	Molybdenum carbonyl (Mo(CO)6)
	Hexacarbonyl molybdenum
	Mo(CO)6
	Molybdenum carbonyl
Inchi:	InChI=1S/6CO.Mo/c6*1-2;
InchiKey:	KMKBZNSIJQWHJA-UHFFFAOYSA-N
Formula:	C6MoO6
SMILES:	[C-]#[O+].[C-]#[O+].[C-]#[O+].[C-]#[O+].[C-]#[O+].[C-]#[O+].[Mo]
Mol. weight [g/mol]:	264.02
CAS:	13939-06-5

Physical Properties

Property code	Value	Unit	Source
affp	762.60	kJ/mol	NIST Webbook
basg	738.10	kJ/mol	NIST Webbook
chs	-2123.40 ± 2.50	kJ/mol	NIST Webbook
chs	-2115.80 ± 4.20	kJ/mol	NIST Webbook
hf	-886.50 ± 4.40	kJ/mol	NIST Webbook
hf	-908.50 ± 2.90	kJ/mol	NIST Webbook
hf	-915.30 ± 2.10	kJ/mol	NIST Webbook
hf	-916.10 ± 4.40	kJ/mol	NIST Webbook
hfs	-989.10 ± 1.80	kJ/mol	NIST Webbook
hfs	-989.90 ± 4.30	kJ/mol	NIST Webbook
hfs	-960.30 ± 4.30	kJ/mol	NIST Webbook
hfs	-982.30 ± 2.70	kJ/mol	NIST Webbook
hsub	73.80 ± 1.00	kJ/mol	NIST Webbook
ie	8.50	eV	NIST Webbook
ie	8.45	eV	NIST Webbook
ie	8.12 ± 0.03	eV	NIST Webbook
ie	8.30 ± 0.03	eV	NIST Webbook
ie	8.23 ± 0.12	eV	NIST Webbook
ie	8.46 ± 0.08	eV	NIST Webbook
ie	8.43 ± 0.05	eV	NIST Webbook
ie	8.23 ± 0.01	eV	NIST Webbook
ie	8.50 ± 0.05	eV	NIST Webbook
ie	8.46 ± 0.01	eV	NIST Webbook

ie	8.20	eV	NIST Webbook
ie	8.25	eV	NIST Webbook
ie	8.50 ± 0.02	eV	NIST Webbook

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
hsubt	77.70	kJ/mol	282.50	NIST Webbook
hsubt	69.10	kJ/mol	369.50	NIST Webbook
hsubt	76.90 ± 0.90	kJ/mol	262.50	NIST Webbook
hsubt	69.70	kJ/mol	363.00	NIST Webbook
hsubt	72.50	kJ/mol	363.00	NIST Webbook
hsubt	72.80	kJ/mol	300.00	NIST Webbook

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C13939065&Units=SI

Legend

affp: Proton affinity
basg: Gas basicity
chs: Standard solid enthalpy of combustion
hf: Enthalpy of formation at standard conditions
hfs: Solid phase enthalpy of formation at standard conditions
hsub: Enthalpy of sublimation at standard conditions
hsubt: Enthalpy of sublimation at a given temperature
ie: Ionization energy

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