

Standard heats of formation of selected compounds

Compound	Phase	Formula	$\Delta H_{\text{o}}^{\text{f}}$ (kJ/mol)	Compound	Phase	Formula	$\Delta H_{\text{o}}^{\text{f}}$ (kJ/mol)
Aluminium chloride	s	AlCl ₃	-705.63	Cesium ion	g	Cs ⁺	457.96
Aluminium oxide	s	Al ₂ O ₃	-1669.8	Cesium chloride	s	CsCl	-443.04
Aluminium hydroxide	s	Al(OH) ₃	-1277	Benzene	l	C ₆ H ₆	48.95
Aluminium chloride	s	Al ₂ (SO ₄) ₃	-3440	Benzoic acid	s	C ₇ H ₆ O ₂	-385.2
Barium chloride	s	BaCl ₂	-858.6	Glucose	s	C ₆ H ₁₂ O ₆	-1271
Barium carbonate	s	BaCO ₃	-1213	Carbon (diamond)	s	C	1.90
Barium hydroxide	s	Ba(OH) ₂	-944.7	Carbon gas	g	C	716.67
Barium oxide	s	BaO	-548.1	Carbon dioxide	g	CO ₂	-393.509
Barium sulfate	s	BaSO ₄	-1473.2	Carbon disulfide liquid	l	CS ₂	89.41
Beryllium hydroxide	s	Be(OH) ₂	-902.9999	Carbon disulfide gas	g	CS ₂	116.70
Beryllium oxide	s	BeO	-609.4	Carbon monoxide	g	CO	-110.525
Boron trichloride	s	Bcl ₃	-402.96	Carbon tetrachloride liquid	l	CCl ₄	-135.4
Bromine ion	l	Br-	-121	Carbon tetrachloride gas	g	CCl ₄	-95.98
Bromine gas (monatomic)	g	Br	111.88	Phosgene	g	COCl ₂	-218.8
Bromine gas (diatomic)	g	Br ₂	30.91	Ethane	g	C ₂ H ₆	-83.85
Bromine trifluoride	g	BrF ₃	-255.60	Ethanol liquid	l	C ₂ H ₅ OH	-277.0
Hydrobromic acid	g	HBr	-36.29	Ethanol gas	g	C ₂ H ₅ OH	-235.3
Cadmium oxide	s	CdO	-258	Ethene	g	C ₂ H ₄	52.30
Cadmium hydroxide	s	Cd(OH) ₂	-561	Vinyl chloride	s	C ₂ H ₃ Cl	-94.12
Cadmium sulfide	s	CdS	-162	Ethyne (acetylene)	g	C ₂ H ₂	226.73
Cadmium sulfate	s	CdSO ₄	-935	Methane	g	CH ₄	-74.87
Calcium gas	g	Ca	178.2	Methanol liquid	l	CH ₃ OH	-238.4
Calcium ion	g	Ca ²⁺	1925.9	Methanol gas	g	CH ₃ OH	-201.0
Calcium carbide	s	CaC ₂	-59.8	Methyl linoleate (biodiesel)	g	C ₁₉ H ₃₄ O ₂	-356.3
Calcium carbonate (Calcite)	s	CaCO ₃	-1206.9	Chloroform liquid	l	CHCl ₃	-134.47
Calcium chloride solid	s	CaCl ₂	-795.8	Chloroform gas	g	CHCl ₃	-103.18
Calcium chloride aqueous	aq	CaCl ₂	-877.3	Propane	g	C ₃ H ₈	-104.7

Compound	Phase	Formula	ΔH_{\circ}^f (kJ/mol)	Compound	Phase	Formula	ΔH_{\circ}^f (kJ/mol)
Calcium phosphate	s	Ca ₃ (PO ₄) ₂	-4132	CO ₂ (aqueous, unionized)	aq	CO ₂ (aq)	-419.26
Calcium fluoride	s	CaF ₂	-1219.6	HCO ₃		HCO ₃	-689.93
Calcium hydride	s	CaH ₂	-186.2	Carbon trioxide		CO ₃	-675.23
Calcium hydroxide	s	Ca(OH) ₂	-986.09	Monatomic chlorine gas	g	Cl	121.70
Calcium hydroxide (aq)	aq	Ca(OH) ₂	-1002.82	Chloride ion	aq	Cl ⁻	-167.2
Calcium oxide	s	CaO	-635.09	Copper (II) oxide	s	CuO	-155.2
Calcium sulfate	s	CaSO ₄	-1434.52	Monatomic hydrogen	g	H	218.00
Calcium sulfide	s	CaS	-482.4	Water gas	g	H ₂ O	-241.818
Wollastonite	s	CaSiO ₃	-1630	Water liquid	l	H ₂ O	-285.8
Cesium gas	g	Cs	76.5	Hydroxide ion	aq	OH ⁻	-230
Cesium liquid	l	Cs	2.09	Hydrogen peroxide	l	H ₂ O ₂	-187.8
Phosphoric acid	l	H ₃ PO ₄	-1288	Mercury (II) oxide (red)	s	HgO	-90.83
Hydrogen cyanide	g	HCN	130.5	Mercury sulfide (red)	s	HgS	-58.2
Hydrogen bromide	l	HBr	-36.3	Ammonia aqueous	aq	NH ₃	-80.8
Hydrogen chloride gas	g	HCl	-92.30	Ammonia gas	g	NH ₃	-45.90
Hydrogen chloride aq	aq	HCl	-167.2	Ammonium chloride	s	NH ₄ Cl	-314.55
Hydrogen fluoride	g	HF	-273.3	Nitrogen dioxide	g	NO ₂	33.20
Hydrogen iodide	g	HI	26.5	Nitrous oxide	g	N ₂ O	82.05
Iodine gas	g	I ₂	62.44	Nitric oxide	g	NO	90.29
Iodine aqueous	aq	I ₂	23	Dinitrogen tetroxide	g	N ₂ O ₄	9.16
Iodide ion	aq	I ⁻	-55	Dinitrogen pentoxide solid	s	N ₂ O ₅	-43.1
Iron carbide (Cementite)	s	Fe ₃ C	5.4	Dinitrogen pentoxide gas	g	N ₂ O ₅	11.30
Iron (II) carbonate (Siderite)	s	FeCO ₃	-750.6	Monatomic oxygen	g	O	249.00
Iron (III) chloride	s	FeCl ₃	-399.4	Ozone	g	O ₃	143.00
Iron (II) oxide (Wustite)	s	FeO	-272	Phosphorus trichloride	l	PCl ₃	-319.7
Iron (II, III) oxide (Magnetite)	s	Fe ₃ O ₄	-1118	Phosphorus trichloride gas	g	PCl ₃	-278
Iron (III) oxide (Hematite)	s	Fe ₂ O ₃	-824.2	Phosphorus pentachloride	s	PCl ₅	-440

Compound	Phase	Formula	ΔH_o^f (kJ/mol)	Compound	Phase	Formula	ΔH_o^f (kJ/mol)
Iron (II) sulfate	s	FeSO ₄	-929	Potassium bromide	s	KBr	-392.2
Iron (III) sulfate	s	Fe ₂ (SO ₄) ₃	-2583	Potassium carbonate	s	K ₂ CO ₃	-1150
Iron (II) sulfide	s	FeS	-102	Potassium chlorate	s	KClO ₃	-391.4
Pyrite	s	FeS ₂	-178	Potassium chloride	s	KCl	-436.68
Lead dioxide	s	PbO ₂	-277	Potassium fluoride	s	KF	-562.6
Lead sulfide	s	PbS	-100	Potassium oxide	s	K ₂ O	-363
Lead sulfate	s	PbSO ₄	-920	Potassium perchlorate	s	KClO ₄	-430.12
Lead (II) nitrate	s	Pb(NO ₃) ₂	-452	Silicon gas	g	Si	368.2
Lead (II) sulfate	s	PbSO ₄	-920	Silicon carbide	s	SiC	-73.22
Magnesium ion	aq	Mg ²⁺	-466.85	Silicon tetrachloride	l	SiCl ₄	-640.1
Magnesium carbonate	s	MgCO ₃	-1095.797	Silica (quartz)	s	SiO ₂	-910.86
Magnesium chloride	s	MgCl ₂	-641.8	Silver bromide	s	AgBr	-99.5
Magnesium hydroxide	s	Mg(OH) ₂	-924.54	Silver chloride	s	AgCl	-127.01
Magnesium hydroxide	aq	Mg(OH) ₂	-926.8	Silver iodide	s	AgI	-62.4
Magnesium oxide	s	MgO	-601.6	Silver oxide	s	Ag ₂ O	-31.1
Magnesium sulfate	s	MgSO ₄	-1278.2	Silver sulfide	s	Ag ₂ S	-31.8
Manganese (II) oxide	s	MnO	-384.9	Sodium carbonate	s	Na ₂ CO ₃	-1130.77
Manganese (IV) oxide	s	MnO ₂	-519.7	Sodium chloride aqueous	aq	NaCl	-407.27
Manganese (III) oxide	s	Mn ₂ O ₃	-971	Sodium chloride solid	s	NaCl	-411.12
Manganese (II, III) oxide	s	Mn ₃ O ₄	-1387	Sodium chloride liquid	l	NaCl	-385.92
Permanganate ion	aq	MnO ₄ ⁻	-543	Sodium chloride gas	g	NaCl	-181.42
Sodium fluoride	s	NaF	-569.0	Titanium gas	g	Ti	468
Sodium hydroxide aqueous	aq	NaOH	-469.15	Titanium tetrachloride	g	TiCl ₄	-763.2
Sodium hydroxide solid	s	NaOH	-425.93	Titanium tetrachloride	l	TiCl ₄	-804.2
Sodium nitrate aqueous	aq	NaNO ₃	-446.2	Titanium dioxide	s	TiO ₂	-944.7
Sodium nitrate solid	s	NaNO ₃	-424.8	Zinc gas	g	Zn	130.7

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Sodium oxide	s	Na ₂ O	-414.2	Zinc chloride	s	ZnCl ₂	-415.1
Hydrogen sulfide	g	H ₂ S	-20.63	Zinc oxide	s	ZnO	-348.0
Sulfur dioxide	g	SO ₂	-296.84				
Sulfur trioxide	g	SO ₃	-395.7				
Sulfuric acid	l	H ₂ SO ₄	-814				