

LITHIUM



Atomic number
3
Atomic weight
6.941
CAS number
7439-93-2
Boiling point
1342°C
Melting point
180.54°C
Specific gravity (20°C)
0.534

Crystal form
Body-centered cubic
Electrical resistivity (20°C)
9.446μΩ • cm
Enthalpy of melting
3.00kJ/mol
Enthalpy of vaporization
147.7kJ/mol
Ionization potential
(spectral) 5.392eV (I)
75.638eV (II)
(aqueous) 3.045V (+1)

Oxidation states
0, 1
Electronegativity, Pauling
1.0
Specific heat (25°C)
0.83 cal/g K
Thermal conductivity (25°C)
84.8w/m K

name **MW** **bp/mm (mp)** **D₄²⁰** **n_D²⁰**

SUBSTRATES

W-NBL-25-01
LITHIUM NIOBATE WAFER 147.85 (1250°)mp 4.659
LiNbO₃ 25mm (1in) x1mm
single side polished, -Z plane optically polished +Z plane fine ground
refractive index, 514.5nm: 2.2099, 2.1476
refractive index, 633nm: 2.2884, 2.2019
refractive index, 1064nm: 2.2340, 2.1544
bandgap: 3.7eV hardness, Mohs: 5
Curie Point: 1145°C lattice constants: a=5.15A, c=13.86A
[12031-63-9] TSCA HMIS: 1-0-0-X each \$290.00

COMPOUNDS

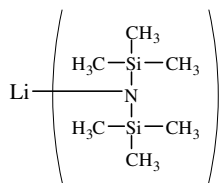
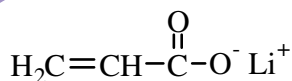
CXLI015
LITHIUM ACRYLATE 78.00
C₃H₃O₂Li
HYDROLYTIC SENSITIVITY: 4 no reaction under neutral conditions
[13270-28-5] HMIS: 3-2-0-X 25g/\$42.00

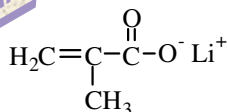
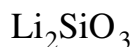
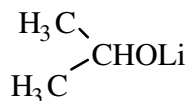
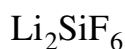
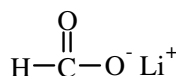
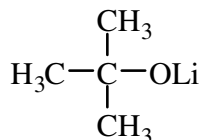
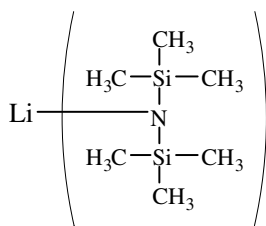
INLI009
LITHIUM ALUMINUM HYDRIDE, pellets 37.95 0.920
H₄AlLi decomposes >130°
reducing agent, source for alane derivatives
HYDROLYTIC SENSITIVITY: 8 reacts rapidly with moisture, water, protic solvents
[16853-85-3] TSCA HMIS: 4-3-2-X 25g/\$38.00 250g/\$228.00

SIL6466.0
LITHIUM ALUMINUM SILICATE 202.09 2.65
α-SPODUMENE hardness, Mohs: 6-7
AII₇O₇Si₂
upon heating converts to eucryptite w/ negative thermal expansion coefficient: -8.5 x10⁻⁶
lowers melt temperature of glasses and glazes
HYDROLYTIC SENSITIVITY: 1 no significant reaction with aqueous systems
[12068-40-5] TSCA HMIS: 1-0-0-X 250g/\$29.00 1kg/\$94.00

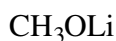
SIL6467.0
LITHIUM BIS(TRIMETHYLSILYL)AMIDE 167.33 114-6°/1
N-LITHIOHEXAMETHYLDISILAZANE
C₆H₁₈LiNSi₂
HYDROLYTIC SENSITIVITY: 8 reacts rapidly with moisture, water, protic solvents
[4039-32-1] TSCA HMIS: 3-3-1-X 25g/\$16.00 100g/\$52.00

POLYMERIZATION





POLYMERIZATION



name	MW	bp/mm (mp)	D ₄ ²⁰	n _D ²⁰
SIL6467.2 LITHIUM BIS(TRIMETHYLSILYL)AMIDE, 1M in hexane C ₆ H ₁₈ LiNSi ₂ HYDROLYTIC SENSITIVITY: 7 reacts slowly with moisture/water [4039-32-1] TSCA HMIS: 3-4-1-X	167.33	flashpoint: -30°C(-23°F)	0.716	
SIL6467.4 LITHIUM BIS(TRIMETHYLSILYL)AMIDE, 1M in tetrahydrofuran C ₆ H ₁₈ LiNSi ₂ HYDROLYTIC SENSITIVITY: 7 reacts slowly with moisture/water [4039-32-1] TSCA HMIS: 3-4-1-X	167.33	flashpoint: -17°C(1°F)	0.891	
AKL454 LITHIUM t-BUTOXIDE C ₄ H ₉ OLi solubility, t-butanol: 12g/l sublimes as hexamer, hexamer in benzene ¹ . 1. M. Bain, Can. J. Chem., 42, 945, 1964 HYDROLYTIC SENSITIVITY: 7 reacts slowly with moisture/water [1907-33-1] TSCA HMIS: 3-4-2-X	80.05	(110°/01)sub solubility, heptane: 80g/l solubility, THF: 196g/l		
AKL458 LITHIUM ETHOXIDE, 2M in ethanol C ₂ H ₅ OLi (9-10 wgt%) HYDROLYTIC SENSITIVITY: 7 reacts slowly with moisture/water [2388-07-0] HMIS: 3-4-1-X	52.00	solubility, ethanol: 125g/l 25g/\$29.00	0.82	
CXLI045 LITHIUM FORMATE, monohydrate HCO ₂ Li•H ₂ O solubility, water: 280g/l HYDROLYTIC SENSITIVITY: 0 - forms stable aqueous solutions [6108-23-2] TSCA HMIS: 3-0-0-X	51.96/69.98	dehydrates> 95°; decomposes>230°C 25g/\$14.00	1.46	
SIL6466.5 LITHIUM HEXAFLUOROSILICATE F ₆ Li ₂ Si•2H ₂ O soluble: water, methanol HYDROLYTIC SENSITIVITY: 0 - forms stable aqueous solutions [17347-95-4] TSCA HMIS: 3-0-0-X	155.96/191.99	dehydrates> 100° 10g/\$56.00	2.33	
AKL459 LITHIUM ISOPROPOXIDE C ₃ H ₇ OLi monoisopropanol adduct HYDROLYTIC SENSITIVITY: 7 reacts slowly with moisture/water [2388-10-5] HMIS: 3-2-1-X	66.03	5.0g/\$78.00		
SIL6469.0 LITHIUM METASILICATE Li ₂ O ₃ Si contains <0.5% K analog HYDROLYTIC SENSITIVITY: 2 reacts with aqueous acids [10102-24-6] TSCA HMIS: 2-0-0-X	89.89	(1204°)mp solubility- water, 70°: 0.6g/l bulk density: 0.8-0.9 g/cc 100g/\$21.00	2.52	
CXLI050 LITHIUM METHACRYLATE C ₄ H ₅ O ₂ Li copolymerization parameters- e,Q: 0.300; 0.640 HYDROLYTIC SENSITIVITY: 4 no reaction under neutral conditions [13234-23-6] HMIS: 3-2-0-X	92.03	25g/\$34.00		
AKL460 LITHIUM METHOXIDE CH ₃ OLi HYDROLYTIC SENSITIVITY: 7 reacts slowly with moisture/water [865-34-9] TSCA HMIS: 3-3-2-X	37.97	(500°)d solubility, methanol: 109g/l solubility, ether: 1.5g/l 25g/\$20.00		100g/\$65.00

PLEASE INQUIRE ABOUT BULK QUANTITIES

	name	MW	bp/mm (mp)	D ₄ ²⁰	n _D ²⁰
CH ₃ OLi	AKL461 LITHIUM METHOXIDE, 9-10% in methanol	37.97		0.795	
	CH ₃ OLi HYDROLYTIC SENSITIVITY: 7 reacts slowly with moisture/water [865-34-9] TSCA HMIS: 3-4-1-X	25g/\$10.00		500g/\$60.00	
	AKL470 LITHIUM 2,4-PENTANEDIONATE	106.05	(250°)mp		
	C ₅ H ₇ O ₂ Li [19185-99-0] HMIS: 3-2-1-X	25g/\$20.00	soluble: methanol	100g/\$65.00	
	SIL6469.5 LITHIUM POLYSILICATE, 20% in water	330.30		1.160	
	Li ₂ O ₁₁ Si ₅ HYDROLYTIC SENSITIVITY: 2 reacts with aqueous acids [12627-14-4] TSCA HMIS: 2-0-0-X	100g/\$10.00		1kg/\$24.00	
	AKL472 LITHIUM TETRAMETHYLHEPTANEDIONATE	192.24	(265-8°)mp		
	C ₁₁ H ₁₉ O ₂ Li HMIS: 2-1-0-X	soluble: methanol, acetone 5.0g/\$49.00			
	CXLI080 LITHIUM TRIFLUOROACETATE	119.86			
	C ₂ F ₃ O ₂ Li reacts w/Grignard reagents to form corresponding trifluoromethylketone F&F 11, 557 HYDROLYTIC SENSITIVITY: 0 - forms stable aqueous solutions [2923-17-3] TSCA HMIS: 3-1-0-X	25g/\$26.00			
	CXLI083 LITHIUM TRIFLUOROMETHANESULFONATE	156.01		1.9	
	CF ₃ O ₃ SLi HYDROLYTIC SENSITIVITY: 6 forms irreversible hydrate [33454-82-9] TSCA HMIS: 3-1-0-X	25g/\$42.00	hygroscopic	100g/\$137.00	
	SIL6469.7 LITHIUM TRIMETHYLSILANOLATE	96.13			
	C ₃ H ₉ OLi HYDROLYTIC SENSITIVITY: 7 reacts slowly with moisture/water [2004-14-0] HMIS: 3-2-1-X	10g/\$48.00			
	SIL6470.0 LITHIUM (TRIMETHYLSILYL)ACETYLIDE, 0.5M	104.15		0.829	
	C ₅ H ₉ LiSi in tetrahydrofuran forms conductive anisotropic films on reaction w/halotriazines ¹ . intermediate for synthesis of alkylgalliumacetylides ² . 1. Chem. Mater., 6, 636, 1994 2. K. Lee et al, J. Organomet. Chem., 449, 53, 1993 HYDROLYTIC SENSITIVITY: 8 reacts rapidly with moisture, water, protic solvents [54655-07-1] HMIS: 3-4-1-X	25g/\$32.00		100g/\$104.00	

DOUBLE METAL AND POLYMERIC ALKOXIDES

name	empirical formula	metal content	metal ratio	density
DLINB050 LITHIUM NIOBIUM (0.85M)	LiNb(OR) _x	0.55-0.60% Li 7.7-7.9% Nb 25g/\$84.00	1:1 Li:Nb	0.99-1.00 100g/\$273.00
DLITA050 LITHIUM TANTALUM	LiTa(OR) _x	0.5-0.6% Li 14.0-14.4% Ta 10g/\$72.00	1:1 Li:Ta	1.06-1.08