

QS-PDS-2023 Revision: 02

Chemical Formula	Li	
Appearance	Metallic silver in color, surface appearance is gray with oil	
Product Specifications	Li	99.8 wt % min
	Na	100 wppm max
	Ca	150 wppm max
	K	300 wppm max
	Fe	100 wppm max
	Si	100 wppm max
	Cl	75 wppm max
	N	300 wppm max
Standard Product	2 lb. trapezoidal ingot: 10.5 inch length x 3.25 inch height x 2.5/3.5 inch width Rod: 0.5 inch diameter x 6.5 inch length; ~11 g Custom products and packaging can be developed based upon mutually agreed specifications.	
Shipping Containers	Technical grade metal is packed under mineral oil. A variety of approved boxes or steel drums are used to accommodate the product and quantity ordered. Standard packaging is permissible for truck or ocean shipment.	
Shelf Life	The quality of technical grade lithium metal in the original unopened and undamaged packaging is guaranteed for six months from date of manufacture.	
Physical Properties	Atomic weight	6.94
	Density	0.534 g/cm ³
	Melting Point	180.5°C
	Boiling Point	1317°C
	Hardness (Mohs)	0.6
	Electrical resistivity @ 20°C	9.35 x 10 ⁻⁶ ohm-cm
	Thermal conductivity, 0-100°C	0.17 cal/cm/°C/sec
	Linear coefficient of thermal expansion @25°C	51 x 10 ⁻⁶
	Volume increase on melting	1.51%
	Isotopic composition (natural)	Li ⁷ 92.6 atomic percent Li ⁶ 7.4 atomic percent

**Toxicity/Safety Data**

In contact with water releases flammable gases which may ignite spontaneously. Causes severe skin burns and eye damage. Keep away from any possible contact with water, because of violent reaction and possible flash fire. Handle under inert gas. Protect from moisture. Wear protective gloves/protective clothing/eye protection/face protection. In case of fire: Use graphite, copper powder, Lith-X (Ansul) for extinction. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician. Reacts violently with water.

COMPLETE INFORMATION ON TOXICITY AND SAFETY IS CONTAINED IN THE SAFETY DATA SHEET (SDS) AVAILABLE FOR THIS PRODUCT.

Handling/Storage/Disposal

Wear safety glasses or goggles and dry rubber gloves. Where relative humidity is maintained below 50%, or lithium surface is coated with mineral oil, lithium pieces can be handled in open atmosphere at room temperature. To maintain best quality, humidity levels of less than 2% are recommended. Store in original unopened shipping container. Once opened, store in argon atmosphere or mineral oil. Keep away from water, humid air, acids and oxidizing materials. Keep away from heat, sparks and flame.

Shipping Limitations

Shipments of lithium metal are described as "Lithium, UN 1415," PG I. All shipments are Hazard Class 4.3 and require "Dangerous When Wet" labels.

Post, Parcel	Not acceptable
Sea	Class 4.3 (IMDG)
Road, Rail	Class 4.3.11 a (RID/ADR)
Air	15kg max. Cargo aircraft only