

LITHIUM ORE

Lithium is an element valuable for the production of glass, aluminum products and batteries, including medical and electronic applications. It is mined from ores of petalite, lepidolite, spodumene and also subsurface brines.

Commodity



Miner / Exporter of Metal Products

ELIPSE is a well-established producer/supplier of lithium ore and many other minerals located in South Jos Plateau State of Nigeria, a Sub-Saharan African region. Our emphasis on delivery quality products and reliable services to our clients is what set us apart from our competitor. We are well positioned to provide our client with competitive pricing, quality and reliability as we continually improving our services to add value to our existing and future customers. Around the world, the most sought-after mineral isn't a precious metal, nor is it oil and gas...it's lithium or some call it, "white petroleum", that has become a crucial element in today's high-tech economy.

Demand for lithium is soaring, and producers are frantically searching for new sources of supply. Prices have doubled in the last two years, rising as high as \$16,500 per ton. Lithium is a metal and is soft with a silvery-white color which changes to a dull silvery-grey color and then to black tarnish on exposure to moist air and this occurs due to corrosion of the surface. It is found in Nasarawa and is deposited in abundance in the State.

Background

Lithium an alkali metals, is a good conductor of heat and electricity as well as a highly reactive element. Lithium metal is soft enough to be cut with a knife, when cut, it possesses a silvery-white color that quickly changes to gray as it oxidizes to lithium oxide..

Lithium can float on the lightest hydrocarbon oils and is one of only three metals that can float on water, the other two being sodium and potassium.

Lithium has a mass specific heat capacity of 3.58 kilojoules per kilogram-Kelvin, the highest of all solids. Because of this, lithium metal is often used in coolants for heat transfer applications.

The world's demand for lithium extraction is increasing every day that is specifically driven by lithium use by consumer in electronic battery technologies and electric automobiles. As well, lithium is useful for the manufacture of glass, lubricants, chemicals and pharmaceuticals product. Lithium extraction and processing depends heavily upon the source of the metal such as underground brine deposits and mineral ore deposits. An overwhelming quantity of lithium is extracted from liquid brine reservoirs that are located beneath salt flats (known as salars), which are located in South America and China region. While lithium production of ore has often richer in lithium content but costly to process as they are mined from hard rock or spodumene formations.

Nigeria is one of the top African countries that is richly blessed with lithium deposits in Cross River, Ebonyi, Abuja, Bauchi, Kaduna, Enugu, Bayelsa, Kogi, Zamfara, Plateau and Nasarawa States. The mineral spread in Nigeria is significant with evidence of 34 various minerals distributed richly endowed geology.

Lithium Ore Specs	
Lithium (Li)	0.02 – 0.06
Potassium (K)	0.53 – 0.66
Magnesium (Mg)	0.03 – 3.83
Cadmium (Ca)	0.02 – 0.09
Boron (B)	0.02 – 1.46
Sodium (Na)	1.03 – 10.30
Chlorine (Cl)	10.1 – 15.80
Melting Point	180,54 degC
Atomic Number	3
Density Solid Form	534 Kg m3
Size:	28-60 ppm



Why work with ELIPSE? The reasons are many.

In this rapidly changing buy/sell environment, ELIPSE strongly believed that we bring value to our clients by maximizing cost-effective solutions by taking care of all freight logistics procedures like vessel chartering, customs clearance, freight forwarding, transportation, containerization, warehousing, insurance, etc. by aligning ourselves with reliable service partners both locally and internationally.

ELIPSE is committed in providing our clients the basic function as international trading specialist role we perform virtually to every activity necessary to assure continued and efficient supply of minerals on every contractual transaction at the most favorable price, quality and conditions from loading port to final destination port at the lowest transportation cost in the shortest possible time.



ELIPSE has a strong operating result that are driven by solid and consistent performance from a diverse portfolio of mines located in five regions. After gaining additional mineral rights in 2017, ELIPSE plan to proceed with its expansion project during the first quarter of 2019. In doing so, ELIPSE will become the largest producing mines in the region and as part of the ELIPSE's goal of becoming an efficient manganese producer, the new strategy focuses on three main areas: 1) Over the short-term growth focus on existing assets and ramping up production at existing mines to achieve full production capacity, 2) On medium-term growth, continues exploration on existing properties to expand our minerals resource base, extend mine longevity and bring new mines into production, and 3) On long-term growth, expand mineral exploration and mining in chromate, tin and even gold.

Uses and Benefits of Lithium Ore

- Lithium is the lightest metal and lowest density.
- Lithium can float on water.
- Lithium is a shiny, soft metal which reacts violently with water forming a strong corrosive base.
- Lithium is added to fireworks to make red sparks.
- Lithium is used extensively in rechargeable batteries. It is also used in many ceramics.
- Lithium is used as an alloy additive to aluminum and magnesium to lower weight and improve strength.
- Lithium is produced by electrolysis of ores containing lithium.
- The first man-made nuclear reaction was the transmutation of lithium into tritium.
- Lithium carbonate is used in small doses to treat manic depression and bipolar disorders.
- Lithium deuteride was an early consideration for thermonuclear bomb fuel.
- Like other alkali metals, lithium can be used to create soap. Lithium soap is used in many commercial lubricants.