

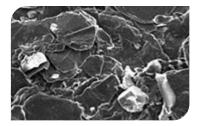


#### ADVANCED MATERIALS

# Advanced Carbon Materials

## **Elevating Performance with High Quality Graphite**

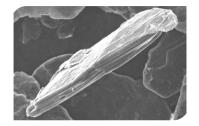
We are pioneers in producing high-purity North American natural flake graphite, ensuring complete chain-of-custody over our materials. With environmentally sustainable processes and cutting-edge innovations, we offer advanced carbon materials tailored to meet the demands of next-generation technological advancements.



+50 Mesh (Coarse Flake)

#### **Applications:**

- Expandable graphite (used in batteries, fire suppressants, and foils).
- Ductile iron components.
- · Fuel cells.
- Advanced metallurgical uses.



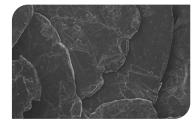
+80 to +100 Mesh (Medium Flake)

#### **Applications:**

- Synthetic diamonds for cutting tools, drill bits.
- Ballistic armor.
- Graphite electrodes for smelting.
- Nuclear applications (critical material for reactors).

Supplying Innovative Technological Applications with High-Purity Natural Flake Graphite

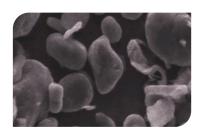
Our materials are custom engineered for various manufacturing industries:



-100 to -400 Mesh (Fine and Superfine Flake)

#### **Applications:**

- Battery materials (lithium-ion, lead-acid, and super capacitors).
- Stealth and radar suppression.
- Heat Resistant conductive coatings.
- Recycled graphite solutions.
- Anti-corrosion coatings.



Sub -400 Mesh (Ultra-Fine Flake)

#### **Applications:**

- · Synthetic diamond precursors.
- Ballistic armor.
- Icephobic and conductive coatings.
- Additive steel making processes.

### **Advanced Prototyping and Testing**



We collaborate with the Advanced Energy Technologies Company (AETC) to validate our materials for high-end applications. The U.S. Navy and Army utilize AETC to validate materials for their various applications and strategic importance for the U.S.



#### NATIONAL SECURITY

- Secure access to high-purity graphite is vital for reducing dependence on foreign suppliers.
- NATO identifies graphite as a critical mineral for allied defense and infrastructure..
- Limited North America production creates a significant strategic vulnerability.



#### **ELECTRIC VEHICLES (EVS)**

- Essential for lithium-ion batteries.
- Clean, natural flake graphite outperforms synthetic alternatives for high-capacity.
- Supports the transition to green energy and zero-emission transportation.



#### **ADVANCED MANUFACTURING**

- Key material for specialty alloys, nuclear reactors, semiconductors and high-performance coatings.
- Many high-end applications require natural flake graphite, synthetic graphite cannot meet the performance, purity, or structural requirements.

Don't let your competition leap ahead. Prototype and test our advanced carbon materials today to enhance your products and ensure a competitive edge. Explore the listed benefits and contact us to uncover additional opportunities specific to your needs.

## The Power of North American Graphite Independence

With a dedicated laboratory and manufacturing partner in North America, we can domestically prototype and test materials collaboratively. This results in highly customized solutions with a faster deployment to help you outperform competitors and improve product performance.



#### **DOMESTIC SUPPLY CHAIN**

- Located in North America
- Mining-Friendly jurisdiction.
- Direct ground access
- US & Canadian incentives, including grants, subsidies and tax.



#### **HIGH VALUE PRODUCTS**

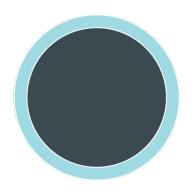
- High-purity natural flake graphite
- Multi-grade deposit for a wider range of applications



#### LOW ENVIRONMENTAL IMPACT

- Unique deposit characteristics allow for green processing.
- No harmful chemicals in process
- Gypsum is the benign byproduct of the entire process. This repurposing supports the circular economy.

## **Driving Innovation with Proprietary Technology**



### **INCREASED CAPACITY**

THE POWER OF SILICON

Graphite Silicon



Silicon Enhanced Graphite

Standard Spheroidized Graphite

We have developed a patent-pending silicon-enhanced spheroidized anode technology that significantly increases power and capacity in lithium-ion batteries. Successfully tested in coin cells, this innovation:

 Incorporates multiple layers of silicon during the spheroidization phase of creating anodes resulting in enhanced performance.

 Offers a major improvement over traditional anode technologies.

A transformative solution for EVs and energy systems.



### Collaborate With Us

We work on a case-by-case basis, offering tailored solutions and opportunities for joint intellectual property (IP) development. Companies with Industrial and Technological Benefits (ITB) room in Canada are encouraged to partner with us to achieve mutual growth.

### Contact



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