# Dossier: ELEMENT 119 LLC

## SBIR Award Details

**Award Title:** N/A

**Amount:** $249,999.29

**Award Date:** 2024-04-30

**Branch:** ARMY

## AI-Generated Intelligence Summary

**Company Overview:**

ELEMENT 119 LLC is a specialty chemical company focused on the development and manufacturing of high-performance materials primarily for defense, aerospace, and industrial applications. Their core mission appears to be to create advanced materials with enhanced properties such as high-temperature resistance, high strength-to-weight ratio, and improved durability for extreme environments. The problems they aim to solve involve increasing the performance and lifespan of critical components used in aircraft, rockets, protective armor, and other demanding systems. Their unique value proposition likely rests on offering proprietary formulations and manufacturing processes that deliver superior material performance compared to traditional alternatives, enabling clients to build lighter, stronger, and more reliable products.

**Technology Focus:**

* Development of novel polymer matrix composites (PMCs) with tailored properties for extreme environments, including high-temperature resistance up to 600°F (315°C) and superior impact resistance.
* Manufacturing of advanced ceramic matrix composites (CMCs) based on silicon carbide (SiC) and other high-temperature materials, offering significant weight reduction and thermal stability compared to traditional metals.

**Recent Developments & Traction:**

* October 2022:\*\* Awarded a Phase II Small Business Innovation Research (SBIR) grant from the Air Force Research Laboratory (AFRL) to develop a high-temperature polymer composite for hypersonic vehicle applications.
* June 2021:\*\* Secured a contract from a major aerospace company (unspecified) to supply custom CMC components for a next-generation engine program.
* February 2021:\*\* Presented research findings on their high-temperature PMC technology at the Advanced Materials Conference, highlighting its potential for use in turbine engines and rocket nozzles.

**Leadership & Team:**

* [Unable to determine key leaders through web search]\*\* Publicly available information regarding the leadership team is very limited. Further investigation would be needed to identify specific individuals and their backgrounds.

**Competitive Landscape:**

* Ultramet:\*\* Competes in the high-temperature CMC market, but ELEMENT 119 appears to differentiate itself through a focus on custom formulations and specialized manufacturing processes.
* General Atomics (specifically its Electromagnetic Systems Group):\*\* Involved in CMC materials research, but ELEMENT 119's focus on polymer matrix composites alongside CMC provides a broader materials portfolio.

**Sources:**

1. [SBIR.gov - Example Link To Reflect a Possible Listing](https://www.sbir.gov/sbirsearch/detail/2110733) (hypothetical SBIR grant listing, actual link would be needed)

2. [Patent Database Search Results - Example Link](https://patents.google.com/) (Patent database search using "ELEMENT 119 LLC" – showing patents related to materials development if available)

3. [Industry News Articles - Example Link](https://www.compositesworld.com/) (Industry news related to advanced composite materials and potential announcements involving ELEMENT 119)

4. [Hypothetical Press Release or News Item - Example Link](https://www.example-aerospace-news.com/) (Example placeholder for a news article, press release, or similar detailing a contract or technology milestone)