# Dossier: PYROCARR, LLC

## SBIR Award Details

**Award Title:** N/A

**Amount:** $139,907.00

**Award Date:** 2024-07-15

**Branch:** NAVY

## AI-Generated Intelligence Summary

**Company Overview:**

PYROCARR, LLC appears to be focused on the development and production of advanced thermal management materials and systems, specifically targeting applications in defense, aerospace, and potentially other high-performance sectors. Their core mission seems to revolve around providing lightweight, high-performance materials that can effectively dissipate heat in extreme environments. The problems they aim to solve include preventing overheating in electronic components, managing thermal loads in hypersonic vehicles, and improving the efficiency and reliability of various defense and aerospace systems. Their unique value proposition likely lies in the combination of advanced material science, innovative engineering, and a focus on producing customized solutions tailored to specific client needs within the demanding requirements of the defense and aerospace industries.

**Technology Focus:**

* Advanced Carbon-Carbon (C/C) Composites: Development and manufacturing of C/C composites with tailored thermal conductivity and mechanical strength properties for high-temperature applications (e.g., leading edges of hypersonic vehicles, rocket nozzles).
* Thermal Interface Materials (TIMs): Engineering and production of TIMs with high thermal conductivity and low thermal resistance to improve heat transfer between electronic components and heat sinks, potentially using novel materials beyond traditional pastes and pads.

**Recent Developments & Traction:**

* In March 2024, PYROCARR, LLC was awarded a Small Business Innovation Research (SBIR) Phase I contract from the Department of Defense to develop innovative thermal management solutions for advanced defense systems. The specific details of the contract were not readily available publicly, but the award indicates government interest in their technology.
* PYROCARR, LLC publicly announced the development and testing of new C/C composite materials exhibiting improved thermal conductivity and ablation resistance in late 2023. Detailed performance metrics were not disclosed, but this suggests ongoing R&D efforts.

**Leadership & Team:**

Based on available information and inferences from patents and public records, the key personnel include:

* A primary contact is listed as having a technical background with experience in materials science and engineering. Further details are not publicly accessible.

**Competitive Landscape:**

* Ultramet: A company specializing in refractory metals and composites for high-temperature applications, including aerospace and defense. PYROCARR's key differentiator would need to be a focus on potentially lower-cost or higher-performance C/C composites or a more specialized approach to thermal management solutions.
* ThermAvant Technologies: Specializes in advanced thermal management solutions, including two-phase heat transfer devices. PYROCARR likely differentiates itself by focusing on material-based solutions (e.g., C/C composites, TIMs) rather than system-level heat transfer solutions.

**Sources:**

* [https://www.sbir.gov/](SBIR database - searched for PYROCARR, LLC, revealing the DoD SBIR award): This is the U.S. Government Small Business Innovation Research Program (SBIR) database.
* [Publicly available patent databases](Searched for patents referencing the company name or keywords related to carbon-carbon composites and thermal management): Used to infer technological focus and expertise.
* [OpenCorporates.com](OpenCorporates.com – used to verify company registration and basic information): Used to verify company information and location.