# Dossier: Materials Systems Inc.

## SBIR Award Details

**Award Title:** N/A

**Amount:** $1,479,589.00

**Award Date:** 2023-05-10

**Branch:** DARPA

## AI-Generated Intelligence Summary

**Company Overview:**

Materials Systems Inc. (MSI), located in Littleton, Massachusetts, focuses on developing and manufacturing advanced materials and components for demanding applications, primarily within the aerospace, defense, and energy sectors. Their core mission appears to be enabling enhanced performance and reliability in extreme environments through innovative material solutions. They aim to solve the challenges of material limitations in high-stress, high-temperature, and corrosive environments by offering custom-engineered materials that exceed the capabilities of traditional alloys and composites. Their unique value proposition centers on their expertise in material formulation, processing, and component design, enabling them to tailor solutions to specific customer needs and provide a comprehensive suite of services from material selection to finished product.

**Technology Focus:**

* High-Temperature Composites:\*\* MSI specializes in ceramic matrix composites (CMCs) for extreme temperature applications. This includes developing CMCs for turbine engine components, hypersonic vehicle structures, and thermal protection systems, capable of withstanding temperatures exceeding 2000°F.
* Advanced Thermal Management Materials:\*\* The company develops and produces materials for efficient heat dissipation and thermal protection, including lightweight heat spreaders and high-conductivity composites. These materials are used in electronics cooling, power generation, and aerospace applications where managing heat is critical.

**Recent Developments & Traction:**

* SBIR/STTR Funding:\*\* Materials Systems Inc. has consistently received Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) funding from various government agencies, including the Department of Defense (DoD) and NASA, to advance their material technologies. Recent awards include projects related to improved thermal management and advanced composite materials.
* Partnerships with Aerospace Primes:\*\* MSI has established partnerships with major aerospace and defense contractors, including collaborations to develop and test new materials for advanced aircraft engines and hypersonic systems. Specific partner names are difficult to confirm without access to proprietary databases.

**Leadership & Team:**

Information on specific leadership roles beyond the general statements of personnel is restricted from public access. The team consists of scientists and engineers with expertise in materials science, aerospace engineering, and manufacturing.

**Competitive Landscape:**

1. \*\*Ultramet:\*\* Ultramet specializes in refractory metal and ceramic composite materials for extreme environments. MSI differentiates itself by offering a broader range of material solutions, including thermal management materials, and focusing on custom-engineered solutions for specific customer needs.

2. \*\*COI Ceramics, Inc.:\*\* COI Ceramics focuses on high-temperature ceramics and composites. MSI differentiates itself via a greater emphasis on high-conductivity composites in addition to CMC's.

**Sources:**

1. [https://www.matsysinc.com/](https://www.matsysinc.com/)

2. [https://www.sbir.gov/](https://www.sbir.gov/) (Search results for "Materials Systems Inc.")

3. [https://www.sam.gov/](https://www.sam.gov/) (Search results for "Materials Systems Inc.")