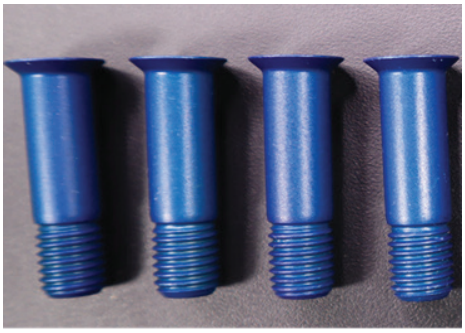
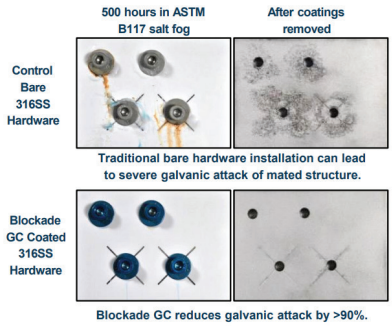
LUNALABS
Advanced Materials Research Group

Blockade GC™
Galvanic Corrosion Protective Coating





Product Name: Blockade GC

Material Type: Hybrid Sol-Gel Coating

Application: Aerospace & Marine Structures

Revolutionary Advantages:
Non-chrome, non-hazardous solution that performs as well as chromate coatings when combined with other non-chrome coatings

Technology Readiness Level 7:
System prototype demonstration in an operational environment

Features & Benefits

Low Cost

Sol-gel formulation offers an economical solution for production and application.

Compatible with various hardware types, allowing for use of cost-effective components without compromising high corrosion protection.

Drop-in Ready

Install factory-sourced parts

No pre-treatment required

Thin barrier coating (4-8 microns) ensures compatibility with existing hardware designs

Government Contract No.
FA8650-21-C-5002

Solution
Luna Labs has developed a revolutionary product called Blockade GC, a cutting-edge chromate free corrosion control coating designed for aircraft fasteners and rivets but applicable to corrosion mitigation challenges across multiple industries. This remarkable coating serves as a durable and thin barrier, providing exceptional galvanic corrosion mitigation around fasteners, bushings, and other dissimilar metallic interfaces.

What sets Blockade GC apart is its ability to block the electrical current that triggers corrosion, effectively addressing the root cause of the problem. By preventing galvanic coupling between components, this innovative coating not only hinders the development of corrosion but also significantly enhances durability and overall performance. It's both an eco-friendly and cost-effective solution that can be easily applied at the factory or by a skilled applicator, eliminating the need for additional steps during installation.

Background
Galvanic corrosion on aircraft around mechanical fasteners represents a significant portion of total maintenance costs and contributes towards reduced operational readiness. Historical approaches to controlling galvanic corrosion involve protecting the anode (e.g. usually the aluminum airframe), but minimal efforts have been made to limit the galvanic contribution at the cathode. There is a need to improve the galvanic corrosion control tool set across these platforms, and technologies that control cathodic current density are a new approach.

Opportunity
Our galvanic corrosion protective coating solution is available for licensing by contacting us at info@lunalabs.us.

Our Luna Labs patent pending invention is available for license to companies with commercial interest. Luna Labs is also interested in partnerships and collaborative researach and development.

LUNA LABS CAPABILITIES

Military-Specific Materials Development
Performance Evaluation& Testing
Lightweight Materials & Structures
Chemical & Biological Defense
Material Synthesis & Characterization
Material Design & Optimization
Failure Analysis & Forensic Investigation
System Integration & Engineering Support
Advanced Coatings & Surface Engineering
Sustainability & Green Materials
Collaboration & Technology Transfer

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