

GlassLock Potting Sealant Transparent Armor Solution



Product Name: GlassLock

Material Type: Polyurethane Sealant

Application: Transparent Armor

Revolutionary Advantages:
Affordable to make at scale, Easy to use,
Successfully completed 6 cycles of testing
required by the US Department of Defense
for application on existing military vehicles

Technology Readiness Level 5:
Technology demonstrated in relevant
environment (Testing under ATPD-2352)

Benefits

- Low Material Costs - Economical
- Easily Applied
- No Contaminants or Solvents
- Requires No Refrigeration

SBIR Topic
Extended Service Life of Transparent Armor
Navy SBIR 2018.1 - Topic N181-001

Solution

Luna Labs has developed an innovative polyurethane sealant specifically designed for transparent armor (TA), offering a durable and environmentally friendly solution. This groundbreaking sealant not only reduces maintenance and lifecycle costs for the US Marine Corps but also addresses the economical challenges posed by current TA sealants on the market.

Our solvent and contaminant-free formulation provides superior performance, significantly extending the lifespan of TA. Unlike existing sealants, Luna Labs sealant minimizes delamination, ensuring long-lasting durability. Furthermore, our solution surpasses the rigorous testing requirements of ATPD-2352, successfully completing 12 cycles on TA coupons.

Background

Currently, the US Military faces a common problem with the relatively short lifespan of TA, which tends to delaminate within 3 to 4 years. This delamination issue not only incurs substantial costs but also hampers vehicle readiness. In fact, TA is often cited as the most unreliable component on military platforms. Considering the high cost of replacement, the Marine Corps alone spends an estimated \$15M to \$20M annually to address delamination-related issues.

Opportunity

Our transparent armor sealant is available for purchase by contacting us at info@lunalabs.us. Luna Labs is also interested in partnerships and collaborative research and development.

For more information contact:

Cameron Childs - Advanced Materials Business Development Manager - cameron.childs@lunalabs.us

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