Ground Vehicle Coating Systems (GVCS)

OBJECTIVE/SOLUTION:
This effort will pursue process and product improvements to reduce the costs of transitioning a survivability enhancing, Chemical Agent Resistant Coatings (CARC) compliant ground vehicle coating. All current Army ground vehicles have requirements to control Infrared (IR) signatures which can be exploited by enemy forces. The Ground Vehicle Coating System (GVCS) will reduce infrared detectability of vehicles. A key component of the GVCS is the pigment flakes. The flake can be produced on machines used to produce similar pigments for civil uses. The key process is a roll-to-roll optical coating. Full implementation of GVCS for all Army ground vehicles would require six fold production increase over all current civil applications. The intent of this GVCS ManTech project is to optimize the production machinery and processes for GVCS flake, which will reduce the capital required to fully facilitate GVCS production and in turn, reduce the ultimate cost to the Army.

Achievements:
- RDECOM has positioned GVCS for significant technology transfer success ($20M+ investment to date in technology development, prior to this ManTech program).
- GVCS has a high level of end-user support (includes endorsement, in-kind support, and funding from PMs)
- Significant survivability increase with no space, weight, or power impacts.
- Successfully demonstrated as a drop in replacement for CARC

Benefits:
- The incremental cost of applying GVCS instead of traditional CARC will be reduced by 33%, from $6,100 to $4,100. Additionally, there will be significant survivability gains for treated vehicles against a near peer enemy force employing infrared targeting.

Weapon System/Secondary Items Impacted:
- PM Bradley — ECP2 Product Improvement
- PM Abrams — CARC Replacement
- USMC PdM Tank Systems

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