



## Department of Defense (DoD) Sustainable Technology Evaluation and Demonstration (STED) Program

# Biobased Cleaner, Lubricant, and Preservative (CLP) Demonstration Summary

### Demonstration Overview

The DoD STED Program is currently demonstrating biobased CLP for weapons and weapons systems at Department of Defense (DoD) Installations.

Firearm cleaners, lubricants, and protectants have been designated for Federal procurement preference by the United States Department of Agriculture (USDA) BioPreferred Program. The BioPreferred Program defines firearms cleaner, lubricants, and protectants as:

*“Products that are designed to care for firearms by cleaning, lubricating, protecting, or any combination thereof. Examples include products that are designed for use in firearms to reduce the friction and wear between the moving parts of a firearm, to keep the weapon clean, and/or to prevent the formation of deposits that could cause the weapon to jam.”*

The BioPreferred Program, with input from the U.S. Army Armaments Center, established a minimum biobased content of 32 percent for firearm cleaners, lubricants, and protectants.

Before these biobased products are utilized by the Military Departments and DoD Components, their performance must be proven to meet DoD requirements. The biobased CLP products participating in this demonstration meet the requirements of MIL-PRF-63460F, Cleaner, Lubricant, and Preservative (CLP) for Weapons and Weapons Systems. MIL-PRF-63460F specifies two Types of CLP Products: Type A, Traditional, (i.e., non-biobased) and Type B, Biobased. Demonstrated products must be on the applicable Qualified Products List for MIL-PRF-63460F under Type B.

### Demonstration Product\*

The following biobased product is currently being demonstrated:

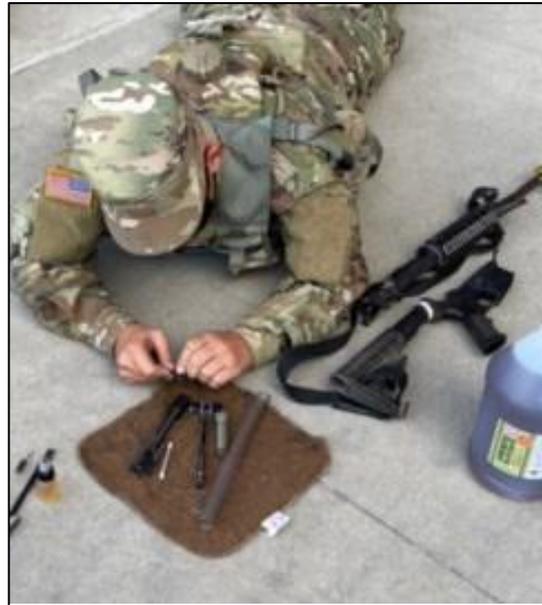
- G96 Synthetic Bio-CLP by G96 Products Inc

*\*Mention of or referral to commercial products, services, and manufacturers herein is provided for informational purposes only and does not constitute endorsement by, nor the official policy or position of, the Department of Defense (DoD), any of its Components, or the U.S. Government.*

### Demonstration Sites

Field demonstrations of Type B (biobased) CLP products have been performed at the following DoD installations and co-located federal facilities to evaluate their performance in Military operational environments and to raise awareness of biobased product availability:

- Fort Jackson





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- Fort Moore
- Anniston Army Depot (ANAD)
- Joint Base Lewis-McChord (JBLM)
- Edwards Air Force Base
- Marine Corps Systems Command
- National Aeronautics and Space Administration (NASA) White Sands Test Facility
- NASA Armstrong Flight Research Center

### Demonstration Details

Military and civilian personnel at DoD installations and Federal agencies are provided a supply of the products for the demonstration period and asked to provide feedback on the product performance. The participating end user and maintenance activities within the listed installations found the biobased CLP products to be acceptable alternatives to, and in many applications outperform, their currently used Type A (non-biobased) products. Participants found weapons treated with the Type B (biobased) products stay lubricated longer and require less biobased CLP during operations and maintenance. Consequently, the amount and frequency of Type B (biobased) CLP use decreased about 35% compared to Type A (non-biobased) products. In addition, participants found that Type B (biobased) products improved carbon removal compared to Type A (non-biobased), resulting in a 30% decrease in cleaning time and related waste (e.g., used cleaning patches). Weapons treated with Type B (biobased) products also had reduced smoke compared to those treated with Type A (non-biobased), while Type B (biobased) products also had a lower odor. Finally, participants found that weapons treated with Type B (biobased) products had reduced instances of weapons malfunction than those treated with Type A (non-biobased), allowing for a greater confidence in weapons reliability.

### Demonstration Product National Stock Numbers

At the request of the U.S. Army Armaments Center, Defense Logistics Agency (DLA) established the following National Stock Numbers for biobased CLP and added biobased CLP (Type B) products to the Qualified Products List (QPL):

NSN	Container Size
9150-01-663-4635	0.5 ounce bottle
9150-01-663-3879	4 ounce bottle
9150-01-663-4643	1 pint bottle with sprayer
9150-01-663-4623	1 liter bottle with sprayer
9150-01-663-4610	1 gallon bottle