

Biobased Penetrating Lubricant Demonstration

Demonstration Overview

Biobased penetrating lubricants are designated for mandatory federal purchasing by the United States Department of Agriculture (USDA) BioPreferred Program. Before the Department of Defense (DoD) utilizes new products, the product's performance must be proven to meet DoD requirements.

In order to prove the performance of biobased penetrating lubricants, the Defense Logistics Agency (DLA) Aviation Hazardous Minimization and Green Products Branch and the National Defense Center for Energy and Environment (NDCEE) demonstrated biobased penetrating lubricants at DoD installations around the country.

Penetrating lubricants are defined as:

"Products formulated to provide light lubrication and corrosion resistance in close tolerant internal and external applications including frozen nuts and bolts, power tools, gears, valves, chains, and cables."

The BioPreferred Program established a minimum biobased content of 68 percent for biobased penetrating lubricants.

The biobased penetrating lubricant products participating in this demonstration all met the requirements of Commercial Item Description A-A-50493, Oil, Penetrating (for Loosening Frozen Metallic Parts).

Demonstration Sites

Field demonstrations of these products were performed at the following DoD installations to evaluate their performance in Military operational environments and to raise awareness in the availability of these products.

- Fort Bragg
- Fort Meade
- Fort Jackson
- U.S. Army Garrison Hawaii (USAG-HI)
- Joint Base Lewis-McChord (JBLM)
- Joint Base Pearl Harbor Hickam (JBPHH)
- Joint Base Charleston (JBC)
- Yakama Training Center (YTC)
- Naval Base Kitsap at Bangor (NBKB)
- Naval Hospital Beaufort
- Marine Corps Air Ground Combat Center (MCAGCC) Twenty Nine Palms
- Marine Corps Air Station (MCAS) Camp Pendleton
- Marine Corps Base (MCB) Camp Pendleton
- Marine Corps Base Hawaii (MCBH)
- Marine Corps Recruit Depot (MCRD) Parris Island
- Marine Corps Mountain Warfare Training Center (MCMWTC) Bridgeport
- South Carolina Army National Guard (SCARNG)
- Pentagon

Demonstration Details

Installation personnel were provided a supply of the biobased products and were asked to provide feedback on the product performance. The maintenance activities within the participating installations found the biobased penetrating lubricants to be acceptable alternatives to their currently used petroleum based products.

As a result of these demonstrations and installation requests for these products, DLA Aviation revised CID A-A-50493 to add a Class A – Biobased and established the following National Stock Numbers for biobased penetrating lubricants:

The A-A-50493 specification is available from the [[DLA Document Services ASSIST website.](http://www.documentsservices.dla.mil/#2)]
(<http://www.documentsservices.dla.mil/#2>)

Demonstration Product National Stock Numbers

NSN / Container Size

9150-01-591-4213 / 1 pint can

9150-01-591-4247 / 1 gallon can

9150-01-591-4281 / 55 gallon drum

9150-01-591-4274 / 11 ounce aerosol