



# Navy Environmental Quality Fact Sheet



## Do you use diesel fuel in non-tactical fleet vehicles?

### Would you like to improve this process in the following areas?

- **Meet environmental compliance regulations.** Reduce regulated emissions from diesel engines. Media areas are air and hazardous waste.
- **Improve workers' safety and health.** Reduce worker exposure to diesel engine emissions.
- **Increase productivity.** No change to current operations.
- **Save money.** Meet alternative fuel vehicle program credit requirements without modifying or replacing existing vehicles.



55 gallon drum of biodiesel fuel

*Biodiesel fuels may be used as an alternative to petroleum fuels in non-tactical vehicle and support equipment operation. Biodiesel fuel is produced from virgin or recycled/recovered vegetable oils and animal fats, which are biodegradable, less toxic, renewable resources. 100% biodiesel is referred to as B100. A blend of 20% biodiesel by volume and 80% petroleum diesel by volume is referred to as B20. B20 is the only biodiesel that can be purchased from Defense Energy Support Center (DESC) at this time. B20 should only be used at locations where fuel will be consumed within 6 months. Biodiesel is most effective in reducing emissions in vehicles that have cycling load conditions (high-low), such as school buses and dump trucks. Biodiesel B20 reduces the amount of particulate emissions from diesel engines by 5 to 50 percent and reduces the toxicity of the particulate emissions that are generated. Diesel particulate emissions are of particular concern due to their carcinogenic effects. Biodiesel B20 also reduces carbon monoxide emissions by 10 to 40 percent, and total hydrocarbon emissions by 20 to 90 percent.*

### How can you achieve these improvements?

Purchase biodiesel fuel blends.

### How does this method work?

Biodiesel B20 may only be used in non-tactical vehicles at this time. B20 can be obtained by ordering through the Naval Petroleum Office (NAVPEOFF).

### How will this method save you money?

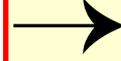
The cost to procure B20 biodiesel fuel products is equivalent to petroleum diesel in most areas. For each 450 gallons of biodiesel B100 or 2,250 gallons of B20 used, the activity does not have to purchase an Alternative Fueled Vehicle (AFV). Using biodiesel reduces regulated diesel engine emissions without having to modify the diesel engines or fuel distribution system.

## Typical Process Flow Diagram

**MATERIALS**  
Diesel Fuels



**PROCESS NAMES**  
Vehicle Operation  
Equipment Operation  
Diesel Generator Operation  
Aircraft Support Equipment  
Operation



**WASTE PRODUCTS**  
Air emissions of:  
- particulate matter  
- hydrocarbons  
- carbon monoxide

How can this product eliminate or reduce pollution?

Using biodiesel fuels reduces the emissions of particulate matter, total hydrocarbons and carbon monoxide from diesel engines. Using this product will result in the following pollution reductions:

- Reduce the emission of air pollutants contributing to photochemical smog.
- Reduce the consumption of petroleum diesel product.

Which processes can benefit most from this product?

This product can be used at activities that operate non-tactical vehicles, generators, or support equipment with diesel engines. Typical shops include:

- Motor pools
- Public works
- Golf courses
- Auto hobby shops

How can this product reduce regulatory compliance concerns?

Biodiesel fuel is produced from renewable resources that are biodegradable and have very low toxicity. Use of this product will reduce regulated air emissions and will result in the following regulatory compliance benefits:

- Helps facilities comply with Energy Policy Act and Executive Order 13149 requirements for federal, state and public utility fleets to use alternative fuel products.
- Helps facilities comply with Executive Order 13134 (Developing and Promoting Biobased Products and Bioenergy) promoting the use of bioenergy products.



### Achieving Environmental Compliance Through Pollution Prevention

Every day the Navy faces the challenge of operating and maintaining the fleet while complying with environmental regulations. This burden can be reduced by using pollution prevention technologies and methods to reduce compliance requirements. This fact sheet is one in a series designed to encourage activities to use pollution prevention technologies and methods. The overall goal of this series is to promote sustained environmental compliance at the lowest life-cycle cost.

For additional information, contact:

Information on services provided by the Defense Energy Support Center can be found on their web site at URL <http://www.desc.dla.mil/>. Order assistance for biodiesel fuels can be obtained by calling the Naval Petroleum Office 703-767-7354 or DSN: 427-7354.

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