

# Biodiesel Factsheet

## **What is biodiesel?**

Biodiesel is a diesel fuel produced from organic feed sources such as soybeans, cooking oil, and animal fats. Biodiesel can be used in its pure form (B100 or “neat”) or blended at any ratio with petroleum diesel to achieve cost efficiency and improve cold weather performance. It is commonly used as B20 - a blend of 20% biodiesel and 80% petroleum diesel.

## **What types of vehicles can use biodiesel?**

Biodiesel can be used in any diesel vehicle without modification. It is used extensively in parts of Europe and is gaining support in the United States. Applications include buses, delivery trucks, waste disposal and recycling trucks, construction and farm equipment, heavy-duty freight hauling, boats and passenger vehicles.

## **How does biodiesel perform?**

Biodiesel performs just like traditional diesel, though B100 may result in a minimal power loss at the high end and a slight reduction in fuel economy. B20 users generally experience no marked difference in fuel economy from petroleum diesel. ASTM International has reviewed biodiesel performance and issued a final specification for what qualifies as quality biodiesel (users should be sure that any fuel they purchase meets ASTM D6751). Because biodiesel acts as a lubricant, it reduces wear and tear on the engine, reducing maintenance costs and extending engine life. Biodiesel remains blended with petroleum diesel so it can be easily stored and dispensed in existing facilities. Biodiesel thickens more than diesel fuel in cold weather and special systems or minor modifications are required for use of B100. Vehicles produced prior to 1993 should have rubber seals in fuel pumps and fuel systems replaced with non-rubber (Viton) seals.

## **What are the benefits of using biodiesel?**

The production of biodiesel has a 1 to 3.2 energy balance ratio. In other words, for every 1 unit of energy that goes into producing biodiesel, 3.2 units of energy are produced. Biodiesel also results in significantly lower emissions of particulate matter, carbon monoxide, toxic contaminants, sulfur dioxide, hydrocarbons, visible smoke and noxious odors than petroleum diesel. Depending on the feed source, biodiesel can result in a 75% reduction in carbon dioxide emissions over the entire production process.

### **Emissions reductions achieved by biodiesel as compared to petroleum diesel**

Source: <http://www.epa.gov/otaq/models/biodsl.htm>

<b>Emission</b>	<b>B99</b>	<b>B20</b>
Carbon Monoxide	47%	12%
Hydrocarbons	67%	20%
Particulates	48%	12%
Sulfates	100%	20%
Nitrogen Oxide	+/-10	+/-2%
Air Toxics	60-90%	20%

Biodiesel is non-toxic and biodegradable and therefore does not pose a threat to water and soil resources if B100 is spilled. Producing biodiesel from restaurant oil or animal processing wastes reduces the amount of materials overcrowding landfills. Additionally, biodiesel is one of the safest fuels to use, handle, and store because it does not produce combustible vapors and has a higher flash point (300° F) than petroleum diesel. Significant benefits of biodiesel include reducing dependence on foreign oil and providing alternative markets for farmers.



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## Where can I get biodiesel?

Biodiesel is currently available in North Carolina through a state purchasing contract ([www.doa.state.nc.us/PandC/405I.htm](http://www.doa.state.nc.us/PandC/405I.htm)). This contract makes B20 available to all government purchasers, including public and private schools, municipalities, and state fleets. It is also available to entities that do not purchase from the state contract through several vendors. B99 is available in several locations in and around the Triangle through two local coops.

## Retail locations

### Exxon (B20)

4401 Roxboro Rd (at N Duke St)  
Durham, NC 27704  
919-471-6924

### Cruizers (B20)

1914 Sedwick Rd (at Hwy 55)  
Durham, NC 27713  
919-806-3458

### Piedmont Biofuels (B99)

37 Thomas Ln (off Pittsboro Moncure Rd)  
Moncure, NC  
919-321-8260

### Carolina Biofuels.org (B99-B100)

112 Baldwin Rd  
Reba and Roses  
Hillsborough, NC 27279  
919-644-2677

### Godar's Garage (B99)

Lochridge Community  
End of Will Bea Rd  
Chapel Hill, NC  
919-942-4852

### Carrboro Public Works (B99)

NC-54 and S. Greensboro  
Carrboro, NC  
919-321-8260  
(Town vehicles and Coop members only\*)

### Bull City Biodiesel (B99)

1404 Angier Av  
Durham, NC 27701  
919-957-1505

### Piedmont Biofuels (B99)

4783 Moncure Pittsboro Rd  
Moncure, NC 27559  
919-321-8260

### Stop & Quick (B20)

1321 S Blount St  
Raleigh, NC  
919-833-8200

### America's Fuel (B20)

801 SW Broad St  
Southern Pines, NC  
910-692-7337

### Tommy's Crown (B20)

7941 Hwy 15-501  
Pinehurst, NC  
910-295-0042

### Clark Cadillac (B20)

35 Dundee Rd  
Pinehurst, NC  
910-295-6101

### Shell (B20)

1161 East St (US Hwy 64 Bus)  
Pittsboro, NC 27312  
919-542-2563

### Hunter Oil and Propane (B20)

1203 S Horner Blvd  
Sanford, NC  
919-776-9741

### Taylor's Grocery (B20)

10005 Six Forks Rd  
Raleigh, NC  
(919) 847-3069

*\*Open to co-op members only. To join Piedmont Biofuels Coop, go to [www.biofuels.coop](http://www.biofuels.coop) or call 919-321-8260. To join Bull City Biodiesel Coop call 919-957-1505. To open your own B99 tank, call Carolina Biofuels.org at 919-957-1505.*

## Distributors

### World Energy

Chelsea, MA  
800 256-4853 /617-889-7300  
[www.worldenergy.net](http://www.worldenergy.net)

### Griffin Industries, Inc.

Cold Spring, KY  
859-572-2589  
[www.griffinind.com](http://www.griffinind.com)

### Piedmont Biofuels Industrial

Pittsboro, NC  
919-321-8260  
[www.biofuels.coop](http://www.biofuels.coop)

### Lubricant Technologies

Raleigh, NC  
919-522-2201  
[www.lubricanttechnologies.com](http://www.lubricanttechnologies.com)

### Grain Growers Cooperative

Rocky Mount, NC 27804  
252-446-7100

### Monson Oil

Cary, NC  
888-486-5925  
[www.monsonoil.com](http://www.monsonoil.com)

### Filter Specialty

Autryville, NC 28318  
910-567-5474  
[www.filter-specialty.com](http://www.filter-specialty.com)

### Carolina Biodiesel

1404 Angier Av  
Durham, NC 27701  
919-957-1505  
[www.carolinabiodiesel.org](http://www.carolinabiodiesel.org)

### Peter Cremer (wholesale B100)

Summerfield, NC 27358  
336-202-0954  
[sbyrd@petercremerna.com](mailto:sbyrd@petercremerna.com)

### Potter Oil & Tire Co., Inc.

Aurora, NC 27806  
252-322-4031

### Oakboro Oil Company, Inc.

Oakboro, NC 28129  
704-485-8018  
[www.oakboroil.com](http://www.oakboroil.com)

## Resources

National Biodiesel Board  
EPA Office of Transportation and Air Quality  
Mapmuse – Fueling locations

[www.biodiesel.org](http://www.biodiesel.org)  
[www.epa.gov/otaq/consumer/fuels/altfuels/biodiesel.pdf](http://www.epa.gov/otaq/consumer/fuels/altfuels/biodiesel.pdf)  
<http://find.mapmuse.com/re1/interest.php?brandID=BODIESEL>