



Biodiesel Fact Sheet

What is biodiesel?

Biodiesel is a naturally oxygenated fuel produced from organic feed sources such as soybeans, cooking oil, and animal fats. Biodiesel can be used in its pure form (B100) 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 rapidly 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. Biodiesel may also be utilized in stationary applications such as diesel generators and boilers.

How does biodiesel perform?

Biodiesel performs 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 (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 considerations 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?

For every 1 unit of fossil fuel energy that goes into producing biodiesel, 3.2 units of energy are produced, a 1:3.2 energy balance ratio. 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 78% reduction in carbon dioxide emissions over the entire production process.

Emissions reductions achieved by biodiesel as compared to petroleum diesel

Source: www.epa.gov/otaq/models/biodsl.htm

Blend	Carbon Monoxide	Hydrocarbons	Particulates	Sulfates	Nitrogen Oxide	Air Toxics
B100	47%	67%	48%	100%	+ 9%	60-90%
B20	12%	20%	12%	20%	+ 2% (- 10%^)	20%

^A 2005 NCDOT study found a decrease in NO with B20 in on-road testing of dump trucks

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 flash point that is twice that of petroleum diesel. Significant benefits of biodiesel include reducing dependence on foreign oil and providing alternative markets for farmers. Low blends of biodiesel are highly effective at enhancing the lubricity of diesel fuel. The typical blend used for lubricity enhancement is 2% biodiesel mixed with 98% diesel (B2).

Where can I get biodiesel?

Biodiesel is currently available in NC through a state purchasing contract (www.doa.state.nc.us/PandC/405l.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 and at several commercial stations throughout the state.

Retail locations:

America's Fuel (B20) 801 SW Broad St Southern Pines, NC 28677 910-692-7337	Exxon (B20) 4401 Roxoboro Rd (at N Duke St) Durham, NC 27704 919-471-6924 (Edward Holmes)	BP #4 (B20) 531 Roosevelt Blvd (Hwy 74) Monroe, NC 28111 704-289-5438
Cruizer's Biofuels (B20) 1914 Sedwick Rd (at Hwy 55) Durham, NC 27713 919-806-3458	Fuel Land #2 (4 B20 pumps) 10222 Johnston Rd. Charlotte, NC 28210 704-543-4600	Gasland USA #3 (B20) 919 S Lafayette St Shelby, NC 28152 704-480-9733
Gasland USA #7 (B20) 1801 E Dixon Blvd. Shelby, NC 28152 704-484-9175	Homer's Truck Stop (6 B20 pumps) 306 Stamey Farm Rd, (I-40, Exit 146) Statesville, NC 28677 704-871-8008	Gas-Up (B20 & B99) 405 Haywood Rd. (I-240, Exit 2) Asheville NC 28806 828-252-5589
I-40 BP (B20) 1975 Old Mountain Rd Statesville, NC 28677 704-873-5588	Godar's Garage (B99) 1000 Will Bea Rd. (off Turkey Farm Rd.) Durham, NC 27705 919-522-0787 Hours: 8-6 Mon-Sat	New Dixie Mart # 19, (B20) I-95 & NC 33 at exit 150 Roanoke Rapids, NC 27870
Oakboro Oil Company (B20) 104 N. Main St, Oakboro, NC 28129 704-485-8018 (David Heath)	Penn Mart (B20) 1600 S. Main Street Salisbury, NC 28144 704-636-0592 (Steve Jarrett)	Tommy's Crown (B20) 7941 Gary Kennedy Hwy. 15-501 Pinehurst, NC 28374 910-295-0042
Amsterdam Mini Mart, (B10) 103 NC 46, (NC 46 & 301) Garysburg NC 27831 252-538-0266	A Double A Enterprise, (B10) 122 Roanoke Ave (NC Hwy 48), Roanoke Rapids, NC 27870, 252-537-0100	Jackson Mini Mart, (B10) 308 Jefferson Street (NC Hwy 158), Jackson NC 27845 252-534-0481
Bounds Oil Co. (B10) Div of New Dixie Oil, Corp., Seaboard, NC 27876 252-589-4571	New Dixie Mart # 2, (B10) 11 Hwy 158, (NC 46 & 158) Roanoke Rapids, NC 27870 252-535-2674	New Dixie Mart # 13, (B10) 142 Julian Allsbrook Hwy, Roanoke Rapids, NC 27870 252-537-1589
Biodiesel Co-ops (Members Only)		
Metrolina Biofuels (B99) Charlotte, NC metrolinabiofuels@yahoo.com metrolinabiofuels.com	Bull City Biodiesel (B99) Durham, Hillsborough, Chapel Hill 919-957-1505 bullcitybiodiesel.org	Piedmont Biodiesel (B99) Moncure, Pittsboro, Carrboro 919-321-8260 biofuels.coop/tanks.shtml

Distributors (complete listings and contact information available at www.ncsoy.org):

Berico Fuels Greensboro	Grain Growers Cooperative Wilson	Pit & Pump #4 Winterville
Blue Ridge Biofuels, LLC Asheville	Griffin Industries, Inc. Cold Springs, KY	Potter Oil & Tire Co., Inc. Aurora
Bounds Oil Company Seaboard	Hill Oil Company Lexington, Midway	Rex Oil Company Thomasville
Bud's Oil Company Harmony	Lowry Oil Elizabeth City	Sampson-Bladen Oil Company Clinton
Carolina Biofuels Durham	Micro Oil (off-road) Micro	Teal Oil Company, Inc. Raeford
Cherry Oil Company Kinston	Monroe Oil Company Monroe	Thomas Petroleum Co., Inc. Shelby
Clark Oil Company (off-road) Belhaven	Monson Oil Cary	United Energy Aiken, SC
Cross Road Fuel Service Hertford	New Dixie Oil Roanoke Rapids, Littleton	Wilson Petroleum Company Wilson
D.M. Price & Sons Seven Springs	Oakboro Oil Company Oakboro	World Energy Chelsea, MA
Filter Specialty Autryville	Parker Gas Co., Inc Newton Grove	
Grace Fuel Company, Inc Asheville	Piedmont Biofuels Pittsboro	

Resources:

National Biodiesel Board	www.biodiesel.org
Alternative Fuels Data Center	www.eere.energy.gov/afdc/altfuel/biodiesel.html
NC Solar Center	www.ncsc.ncsu.edu
Triangle Clean Cities Coalition	www.trianglcleancities.org
Centralina Clean Fuels Coalition	www.4cleanfuels.com
Land-of-Sky Clean Vehicle Coalition	www.landofsky.org/planning/p_cvc_home.html

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