

# Product Description - Classic



New Generation Biofuel's **Classic** formulation provides a renewable biofuel with outstanding environmental and performance characteristics. It is formulated to be utilized in a multitude of applications where #2 diesel, related distillates, or biodiesel are typically used.

**Classic** products have many features that set us apart from other fuels:

- Demonstrated enhanced environmental performance. Our formulation technology essentially eliminates Sulfur Oxides (SO<sub>x</sub>) emissions and can significantly reduce Nitrogen Oxides (NO<sub>x</sub>). We have demonstrated >40% reductions in NO<sub>x</sub> emissions in multiple applications.
- Low temperature flow enhancements. Our depressed pour point improves handling and operability in colder conditions, helping minimize or eliminate special handling or the chances of product cavitation or starving fuel feed systems.
- Low metals content. Our products are formulated to minimize any metals/salts in our products, usually less than one part per million (<1 ppm) concentrations.
- Enhanced lubricity.
- Strong light off/ignition properties. Whether you start up on our product or do a running switch, Classic will keep your application up and running.

Our manufacturing process for **Classic**...

...is a low energy process so we can provide big energy output with little energy input.

...does not produce byproducts like other fuel manufacturing processes.

...allows us to tailor formulations to enhance certain performance characteristics.

...can utilize various feedstocks to address cost and supply issues.

All of these are advantages versus competitive products.

**Classic**, along with our other biofuel products, are *emulsions*. *Emulsions* are the combination of products that are normally immiscible but, through our formulation expertise and manufacturing capabilities, can be combined into one homogenous and stable product. That allows us to take the strengths of our raw materials and combine them to provide you unique products with unique solutions for the enhanced performance of your application.

Our Product Data Sheet (PDS) provides guidance on the physical characteristics of our products. You will see that some of our tests are similar or identical to other fuels you may be familiar with using. Since we are a new product technology, you will also note that we differ in some tests since our emulsion technology is significantly different than other products.

We do not create *glycerin* in our process, so it is not included. Since we are not a distilled petroleum product a typical *distillation curve* is not applicable.

We also include data that shows the strength and stability of our products such as *water & sediment* (demonstrates physical stability of the emulsion), *oxidative stability*, and *iodine number*. *Iodine number* demonstrates saturation levels in the products. Values less than 115 are considered stable products for storage and handling purposes.

*Please note that variations in performance may be experienced based on the application and operating parameters.*

If you have any questions about **Classic** or **New Generation Biofuels**, please contact your sales representative. You can also find additional information on our website: [www.newgenerationbiofuels.com](http://www.newgenerationbiofuels.com)

# Product Data Sheet

## Classic



Test	Units	Test Method	Typical	Minimum	Maximum
Flash Point (closed cup)	°F	D93		77	
	°C	D93		25	
Water and Sediment	% volume	D1796 or D2709			0.05
Ash	% mass	D482			0.001
Sulfated Ash	% mass	D874			0.001
Carbon Residue (100% sample)	% mass	D4530			0.05
Sulfur	Ppm	D5453			1.0
Copper Strip Corrosion	--	D130			1b
Pour Point	°F	D97	-49		-6
	°C	D97	-45		-21
Lubricity, @ 60°C – wear scar diameter	mm	D6079	0.225		
Specific Gravity @ 60°F/60°F	--	AOCS Cc 10a-25	0.93		
Gravity @ 60°F	Degrees API	D4052	21		
Gross Heat of Combustion	Btu/lb	D240	11,900		
Phosphorus	Ppm	D4951 or IAC - 027			1.0
Sodium plus Potassium	ppm	EN 14538 or IAC-027			1.0
Calcium and Magnesium	Ppm	EN 14538 or IAC-027			1.0
Lead	Ppm	IAC – 027 mod. B			0.1
Copper	Ppm	IAC – 027 mod. B			0.1
Vanadium	Ppm	IAC – 027 mod. B			0.05
Total Acid Number	mg KOH/g	D664			0.04
Kinematic Viscosity @ 40°C	cSt	D445	53		
Oxidation Stability	hours	EN 14112	5.7		
Iodine Number	--	AOCS Cd 1d-62	70.3		
Vapor Pressure @ 100 °F	Psi	D323 proc. A	0.75		
Ultimate Analysis (CHONS)	% mass	D5291	C = 59.8		
			H = 10.2		
			O = 29.9		
			N < 0.3		
			S = 0		

<p>Chief Executive Officer</p>  <p>Cary J. Claiborne</p>	<p>Chief Technology Officer</p>  <p>Andrea Festuccia</p>	<p>Date</p> <p>25 November 2009</p>
		<p>Spec/Rev.</p> <p>8</p>
		<p>Product Data Sheet</p> <p>CLASSIC</p>