

Environmental & Safety INFORMATION

Acute Oral Toxicity/Rates

- ▶▶ Biodiesel is nontoxic. The acute oral LD50 (lethal dose) is greater than 17.4 g/Kg body weight. By comparison, table salt (NaCl) is nearly 10 times more toxic.

Skin Irritation Humans

- ▶▶ A 24-hr. human patch test indicated that undiluted biodiesel produced very mild irritation. The irritation was less than the result produced by a 4 percent soap and water solution.

Aquatic Toxicity

- ▶▶ A 96-hr. lethal concentration for bluegill of biodiesel grade methyl esters was greater than 1000 mg/L. Lethal concentrations at these levels are generally deemed “insignificant” according to NIOSH (National Institute for Occupational Safety and Health) guidelines in its Registry of the Toxic Effects of Chemical Substances.

Biodegradability

- ▶▶ Biodiesel degrades about four times faster than petroleum diesel. Within 28 days, pure biodiesel degrades 85 to 88 percent in water. Dextrose (a test sugar used as the positive control when testing biodegradability) degraded at the same rate. Blending biodiesel with diesel fuel accelerates its biodegradability. For example, blends of 20 percent biodiesel and 80 percent diesel fuel degrade twice as fast as #2 diesel alone.

Flash Point

- ▶▶ The flash point of a fuel is defined as the temperature at which it will ignite when exposed to a spark or Biodiesel’s flash point is over 300° Fahrenheit, well above petroleum based diesel fuel’s flash point of around 125° Fahrenheit. Testing has shown the flash point of biodiesel blends increases as the percentage of biodiesel increases. Therefore, biodiesel and blends of biodiesel with petroleum diesel are safer to store,

