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ENVIRONMENTAL & SAFETY INFORMATION

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Biodiesel is a renewable resource that is gaining widespread use around the world due to its environmental and safety benefits.

Its principal benefit is that it is non-toxic. It is also highly biodegradable, has a low vapor pressure and has a much higher flash point than petro-diesel making it easy and safe to store.

Oral toxicity

Biodiesel is non-toxic orally. It would require large amounts to be consumed before any meaningful level of toxicity is approached. With an acute oral LD50 (lethal dose) of biodiesel greater than 17.4 g/Kg body weight, it is 10 times less toxic than table salt.

Skin irritation - humans

Biodiesel has been shown to produce only very mild skin irritation in humans. Tests implemented were a 24-hour human patch test which showed skin irritation was less than a four per cent soap and water solution.

Aquatic toxicity

Lethal concentrations of biodiesel on aquatic life have been deemed "insignificant" by the NIOSH (National Institute for Occupational Safety and Health) guidelines in its *Registry of the Toxic Effects of Chemical Substances*.

This determination came after a 96-hour test of lethal concentrations for bluegill of biodiesel grade methyl esters which was greater than 1000mg/L, a negligible figure.

Biodegradability

Biodiesel degrades about four times faster than petro-diesel. Within 28 days, pure biodiesel degrades 85 to 88 per cent in water with dextrose, a test sugar used as the positive control when testing biodegradability, degrading at the same rate.

Blending biodiesel with petro-diesel accelerates its biodegradability. For example, blends of 20 percent biodiesel and 80 per cent petro-diesel degrade twice as fast as petro-diesel alone.

Flash point

The flash point of a fuel is the lowest temperature at which the vapor above a combustible liquid can be made to ignite in air.

Biodiesel's flash point is over 120° centigrade, well above petro-diesel's flash point of around 45° centigrade.

Testing has shown the flash point of blended biodiesel increases as the percentage of biodiesel in the blend rises. This makes biodiesel and blends of biodiesel with petro-diesel safer to store, handle, and use than conventional diesel fuel.