

BIODIESEL B99 SAFETY DATA SHEET



Synonym: B99 Biodiesel, Soy Biodiesel

Section 1 – Product and Company Identification

Manufacturer Information: Various Refineries

Distributor: Crystal Flash
1754 Alpine Ave NW
Grand Rapids, MI 49504

Phone: (616)363-4851
Emergency # 800-535-5053 INFOTRAC
www.crystalflash.com

Section 2 - Hazardous Identification

Classification

OSHA Regulatory Status

This chemical is considered hazardous according to the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin Sensitization

Category 1B

Acute Toxicity

Category 2

Hazards Not Otherwise Classified (HNOC)

Not applicable

Label Elements

EMERGENCY OVERVIEW

Warning

May cause an allergic skin reaction

Toxic to aquatic life



Appearance: Clear or Amber Liquid

Physical State: Liquid

Odor: Slight

Precautionary Statements - Prevention

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Do not breathe mist/vapors/spray

Wear protective gloves/protective clothing/eye protection/face protection Contaminated work clothing should not be allowed out of the workplace Avoid release to the environment

Precautionary Statements - Response

IF exposed or concerned: Get medical attention

IF ON SKIN: Wash with plenty of soap and water

If skin irritation or rash occurs: Get medical attention

Wash contaminated clothing before reuse

Get medical attention if you feel unwell

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container at an approved waste disposal plant

Section 3 – Composition/Information on Ingredients

Biodiesel is a complex mixture of C16-C18 methyl esters derived from the processing of vegetable oil or animal fat and diesel fuel.

Composition Information:

Name	CAS Number	Weight %
Biodiesel (Tallow derived)	61788-61-2	0-100
Biodiesel (Soybean derived)	67784-80-9	0-100
Biodiesel (Rapeseed derived)	73891-99-3	0-100
Biodiesel (Fatty Acid, Methyl Ester)	68937-84-8	0-100
Biodiesel (Canola derived)	129828-16-6	0-100
No. 2 Diesel Fuel	68476-34-6	0-1
Methanol (Methyl Alcohol)	67-56-1	0-0.2

Section 4 – First Aid Measures

General advice In case of accident or if you feel unwell, seek medical advice immediately (show directions for use or safety data sheet if possible).

Inhalation: Move victim to fresh air. Provide respiratory support, if necessary. Get medical attention if cough or other respiratory symptoms develop.

Skin Contact: Immediately wash exposed skin with plenty of soap and water while removing contaminated clothing and shoes. Get medical attention if irritation or rash occurs. Wash contaminated clothing before re-use.

Eye Contact: Flush immediately with large amounts of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Gently remove contacts while flushing. Get medical attention if irritation persists.

Ingestion: If swallowed, DO NOT induce vomiting. If spontaneous vomiting occurs, keep head below hips, or if patient is lying down, turn body and head to side to prevent aspiration and monitor for breathing difficulty. Get immediate medical attention.

Most important signs and symptoms, both short-term and delayed with overexposure

Adverse Effects: Contact may cause skin dermatitis and/or irritation. Preexisting skin conditions and/or respiratory disorders may be aggravated by exposure to this product.

Indication of any immediate medical attention and special treatment needed

NOTES TO PHYSICIAN: INGESTION: Do not induce vomiting. Low viscosity product can be sucked into the lungs and cause damage after swallowing or vomiting. Contains small amounts of methanol (0.2%). The metabolism of fatty acid methyl ester may release free methanol in the body that could induce metabolic acidosis with delayed effects. If a large amount of product is ingested, i.e. several ounces, consider the use of ethanol or fomepizole (Antizol) and hemodialysis. Consult standard literature or contact a poison control center for treatment details.

Section 5 – Fire Fighting Measures

Suitable extinguishing media

For small fires, Class B fire extinguishing media such as CO₂, dry chemical, foam or water spray can be used. For large fires, water spray, fog or foam can be used. Firefighting should be attempted only by those who are adequately trained and equipped with proper protective equipment.

Unsuitable extinguishing media

Do not use straight water streams to avoid spreading fire.

Specific hazards arising from the chemical

This product is not a flammable liquid per the OSHA Hazard Communication Standard, but will ignite and burn at temperatures exceeding the flash point. Spontaneous combustion may occur under high temperature, closed conditions if material is absorbed in various fiber matrices and oxygen is present (e.g. oily rags). Vapors are heavier than air and may accumulate in low lying areas. Vapors may accumulate in confined spaces. For additional fire related information, see NFPA 30 or the North American Emergency Response Guide 128.

Hazardous combustion products

Smoke, carbon monoxide, and other products of incomplete combustion.

Explosion data

Sensitivity to Mechanical Impact No.

Sensitivity to Static Discharge No.

Special protective equipment and precautions for firefighters

Firefighters should wear full protective clothing and positive-pressure self-contained breathing apparatus (SCBA) with a full face-piece, as appropriate. Avoid using straight water streams. Water spray and foam (AFFF/ATC) must be applied carefully to avoid frothing and from as far a distance as possible. Avoid excessive water spray application. Keep surrounding area cool with water spray from a distance and prevent further ignition of combustible material. Keep run-off water out of sewers and water sources.

NFPA: Health – 2 Flammability – 1 Instability – 0 Special Hazards -

Section 6 – Accidental Release Measures

Personal Precautions: Keep public away. Isolate and evacuate area. Shut off source if safe to do so. Eliminate all ignition sources. All contaminated surfaces will be slippery.

Protective Equipment: Use personal protection measures as recommended in Section 8.

Emergency Procedures: Advise authorities and National Response Center (800-424-8802) if the product has entered a water course or sewer. Notify local health and pollution control agencies, if appropriate.

Environmental precautions: Avoid release to the environment. Avoid subsoil penetration.

Methods and materials for containment: Contain liquid with sand or soil.

Methods and materials for cleaning up: Use suitable absorbent materials such as vermiculite, sand, or clay to clean up residual liquids. Recover and return free product to proper containers. Clean contaminated surface thoroughly.

Section 7 – Handling and Storage

Safe Handling Precautions:

NEVER SIPHON THIS PRODUCT BY MOUTH. Do not expose to heat, open flames, strong oxidizers or other sources of ignition. Avoid repeated and prolonged skin contact. Do not cut, drill, grind or weld on empty containers since explosive residues may remain. Refer to applicable EPA, OSHA, NFPA and consistent state and local requirements.

Storage Conditions:

Store in properly closed containers that are appropriately labeled and in a cool, well-ventilated area. Store wiping rags in metal cans with tightly fitting lids. Corrosion and microbial growth are promoted by the presence of water. Avoid contamination by storing in water-free tanks with scheduled water drainage. Contact with copper/alloys, lead, tin and zinc may result in increased sediment and deposits that can plug filters. Degradation can be avoided by preventing temperature extremes and the presence of air during storage.

Incompatible materials: Strong oxidizing agents.

Section 8 – Exposure Controls/Personal Protection

Name	ACGIH TLV	OSHA PELs:	OSHA - Vacated PELs	NIOSH IDLH
Biodiesel (Tallow derived)	-	-	-	-
Biodiesel (Soybean derived)	-	-	-	-
Biodiesel (Rapeseed derived)	-	-	-	-
Biodiesel (Fatty Acid, Methyl Ester)	-	-	-	-
Biodiesel (Canola derived)	-	-	-	-
No. 2 Diesel Fuel	100 mg/m3 TWA Skin - potential significant contribution to overall exposure by the cutaneous route	-	-	-
Methanol (Methyl Alcohol)	200 ppm TWA 250 ppm STEL Skin - potential significant contribution to overall exposure by the cutaneous route	TWA: 200 ppm TWA: 260 mg/m3	TWA: 200 ppm TWA: 260 mg/m3 STEL: 250 ppm STEL: 325 mg/m3 Skin*	6000 ppm

Engineering measures: Ensure adequate ventilation, especially in confined areas. Local or general exhaust required when using at elevated temperatures that generate vapors or mists. Use mechanical ventilation equipment that is explosion-proof.

Personal protective equipment

Eye protection: Use goggles or face-shield if the potential for splashing exists.

Skin and body protection: Wear neoprene, nitrile or PVA gloves to prevent skin contact. Glove suitability is based on workplace conditions and usage. Contact the glove manufacturer for specific advice on glove selection and breakthrough times.

Respiratory protection: Breathing apparatus needed when aerosol or mist is formed. Observe respirator assigned protection factors (APFs) criteria cited in federal OSHA 29 CFR 1910.134. Self-contained breathing apparatus should be used for fire fighting.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing.

Section 9 – Physical and Chemical Properties

Information on basic physical and chemical properties

Physical State:	Liquid
Appearance:	Clear or Amber Liquid
Color:	Clear or Amber
Odor:	Slight
Odor Threshold:	No available data.
Property	Values (Method)
Melting Point / Freezing Point:	-1.0 °C / 30 °F
Initial Boiling Point / Boiling Range:	No available data.
Flash Point:	≥ 93 °C / ≥ 200 °F
Evaporation Rate:	No available data.
Flammability (solid, gas):	Not applicable.
Upper Flammability Limit in Air(%):	No available data.
Lower Flammability Limit in Air(%):	No available data.
Vapor Pressure:	No available data.
Vapor Density:	No available data.
Specific Gravity / Relative Density:	0.87 @ 25°C
Water Solubility:	Negligible
Solubility in other solvents:	No available data.
Partition Coefficient:	No available data.
Decomposition temperature:	No available data.

pH:	Not applicable
Autoignition Temperature:	No available data.
Kinematic Viscosity:	No available data.
Dynamic Viscosity:	No available data.
Explosive Properties:	No available data.
Softening Point:	No available data.
VOC Content (%):	No available data.
Density:	7.35 lbs/gal.
Bulk Density:	Not applicable.

Section 10 – Stability and Reactivity

Reactivity	The product is non-reactive under normal conditions.
Chemical stability	The material is stable at 70°F, 760 mmHg pressure.
Possibility of hazardous reactions	None under normal processing.
Hazardous polymerization	Will not occur.
Conditions to avoid	Excessive heat, sources of ignition, open flame. Water contamination during storage.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	None known under normal conditions of use.

Section 11 – Toxicological Information

Potential short-term adverse effects from overexposures

Inhalation:	Excessive inhalation of mist may result in respiratory irritation. Overheating may produce vapors which may cause respiratory irritation, dizziness and nausea.
Eye contact:	Produces little or no irritation on direct contact with the eye.
Skin contact:	May cause sensitization by skin contact. Prolonged and repeated contact may cause defatting and drying of the skin and may lead to irritation and/or dermatitis.
Ingestion:	Ingestion of large amounts may cause gastrointestinal disturbances. Aspiration into lungs may cause chemical pneumonia and lung damage.

Acute Toxicological data

Name	Oral LD50	Dermal LD50	Inhalation LC50
Biodiesel (Tallow derived) 61788-61-2	-	-	-
Biodiesel (Soybean derived) 67784-80-9	> 5000 mg/kg (Rat)	> 5000 mg/kg (Rabbit)	-
Biodiesel (Rapeseed derived) 73891-99-3	-	-	-
Biodiesel (Fatty Acid, Methyl Ester)	> 2000 mg/kg (Rat)	-	-
Biodiesel (Canola derived) 129828-16-6	-	-	-
No. 2 Diesel Fuel 68476-34-6	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	>1 - <5 mg/L (Rat) 4 h
Methanol (Methyl Alcohol) 67-56-1	>2000 mg/kg (Rat)	>5000 mg/kg (Rabbit)	>40 mg/L (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

BIODIESEL (SOYBEAN DERIVED): Dermal sensitization study (Guinea Pigs) repeat insult patch procedure with induction and challenge patches indicated a positive sensitization response.

PETROLEUM MIDDLE DISTILLATES: May cause damage to organs after repeated and prolonged dermal overexposure. Repeated dermal application for 13 weeks has produced decreased liver, thymus, and spleen weights. Microscopic alterations included liver enlargement and damage. Petroleum middle distillates have produced skin tumors in mice after repeated and prolonged skin contact and have tested positive with in vitro genotoxicity tests. Additional studies indicated prolonged skin irritation contributes to tumor development. Repeated dermal exposures to high concentrations of petroleum middle distillates in test animals resulted in reduced litter size and litter weight, and increased fetal resorptions at maternally toxic doses. Dermal exposure to high concentrations resulted in severe skin irritation with weight loss and some mortality.

Adverse effects related to the physical, chemical and toxicological characteristics

Signs & Symptoms: May cause allergic skin reaction. Repeated or prolonged skin contact may cause drying, reddening, itching and cracking.

Sensitization: May cause sensitization by skin contact. Not expected to be a respiratory sensitizer.

Mutagenic effects: None known.

Carcinogenicity: Cancer designations are listed in the table below.

Name	ACGIH (Class)	IARC (Class)	NTP	OSHA
Biodiesel (Tallow derived)	Not Listed	Not Listed	Not Listed	Not Listed
Biodiesel (Soybean derived)	Not Listed	Not Listed	Not Listed	Not Listed
Biodiesel (Rapeseed derived)	Not Listed	Not Listed	Not Listed	Not Listed
Biodiesel (Fatty Acid, Methyl Ester)	Not Listed	Not Listed	Not Listed	Not Listed
Biodiesel (Canola derived)	Not Listed	Not Listed	Not Listed	Not Listed
No. 2 Diesel Fuel	Confirmed animal carcinogen (A3)	Not Classifiable (3)	Not Listed	Not Listed
Methanol (Methyl Alcohol)	Not Listed	Not Listed	Not Listed	Not Listed

Reproductive toxicity:

None known.

Specific Target Organ Toxicity (STOT) - Single Exposure:

Not classified.

Specific Target Organ Toxicity (STOT) - Repeated Exposure:

Thymus. Liver. Bone marrow.

Aspiration Hazard:

Potential for aspiration if swallowed.

Section 12 - Ecological Information

Ecotoxicity: This product should be considered toxic to aquatic organisms.

Name	Algae/aquatic plants	Fish	Toxicity to Microorganisms	Crustacea
Biodiesel (Tallow derived)	-	-	-	-
Biodiesel (Soybean derived)	-	-	-	-
Biodiesel (Rapeseed derived)	-	-	-	-
Biodiesel (Fatty Acid, Methyl Ester)	-	96-hr LC50 = 550 mg/l Zebrafish (semi-static)	-	24-hr LC50 = 4.65 mg/l Daphnia magna
Biodiesel (Canola derived)	-	-	-	-
No. 2 Diesel Fuel	-	96-hr LC50 = 35 mg/l Fathead minnow (flow-through)	-	48-hr EL50 = 6.4 mg/l Daphnia magna
Methanol (Methyl Alcohol)	-	96-hr LC50 > 100 mg/l Fathead minnow 96-hr LC50 > 10,000 mg/l Rainbow trout	-	48-hr EC50 > 10,000 mg/l Daphnia magna

Persistence and Degradability:	Expected to be readily biodegradable under aerobic conditions.
Bioaccumulation:	Not expected to bioaccumulate in aquatic organisms.
Mobility in Soil:	Insoluble and floats on water. May partition into air, soil and water.
Other Adverse Effects:	No information available.

Section 13 – Disposal Considerations

Description of Waste Residues

Long-term storage may result in decomposition of the oil and could result in a rancid odor.

Safe Handling of Wastes

Handle in accordance with applicable local, state, and federal regulations. Use personal protection measures as required. Do not expose to heat, open flames, strong oxidizers or other sources of ignition.

Disposal of Wastes / Methods of Disposal

The user is responsible for determining if any discarded material is a hazardous waste (40 CFR 262.11). Dispose of in accordance with federal, state and local regulations.

Methods of Contaminated Packaging Disposal

Empty containers should be completely drained and then discarded or recycled, if possible. Do not cut, drill, grind or weld on empty containers since explosive residues may be present. Dispose of in accordance with federal, state and local regulations.

Section 14 – Transport Information

Transport Information: This material when transported via US commerce is NOT REGULATED by DOT regulations.

DOT (49 CFR 172.101):

UN Proper shipping name:	Not Regulated
UN/Identification No:	Not applicable
Transport Hazard Class(es):	Not applicable
Packing group:	Not applicable

Section 15 - Regulatory Information

US Federal Regulatory Information:

US TSCA Chemical Inventory Section 8(b): This product and/or its components are listed on the TSCA Chemical Inventory.

EPA Superfund Amendment & Reauthorization Act (SARA):

SARA Section 302: This product does not contain any component(s) included on EPA's Extremely Hazardous Substance (EHS) List.

Name	CERCLA/SARA - Section 302 Extremely Hazardous
Biodiesel (Tallow derived)	NA
Biodiesel (Soybean derived)	NA
Biodiesel (Rapeseed derived)	NA
Biodiesel (Fatty Acid, Methyl Ester)	NA
Biodiesel (Canola derived)	NA
No. 2 Diesel Fuel	NA
Methanol (Methyl Alcohol)	NA

SARA Section 304: This product may contain component(s) identified either as an EHS or a CERCLA Hazardous substance which in case of a spill or release may be subject to SARA reporting requirements:

Name	CERCLA/SARA - Hazardous Substances and their Reportable Quantities
Biodiesel (Tallow derived)	NA
Biodiesel (Soybean derived)	NA
Biodiesel (Rapeseed derived)	NA
Biodiesel (Fatty Acid, Methyl Ester)	NA
Biodiesel (Canola derived)	NA
No. 2 Diesel Fuel	NA
Methanol (Methyl Alcohol)	5000 lb final RQ 2270 kg final RQ

SARA: The following EPA hazard categories apply to this product:

Acute Health Hazard
Chronic Health Hazard

SARA Section 313: This product may contain component(s), which if in exceedance of the de minimus threshold, may be subject to the reporting requirements of SARA Title III Section 313 Toxic Release Reporting (Form R).

Name	CERCLA/SARA 313 Emission reporting:
Biodiesel (Tallow derived)	None
Biodiesel (Soybean derived)	None
Biodiesel (Rapeseed derived)	None
Biodiesel (Fatty Acid, Methyl Ester)	None
Biodiesel (Canola derived)	None
No. 2 Diesel Fuel	None
Methanol (Methyl Alcohol)	1.0 % de minimis concentration

Section 16 - Other Information

Revision Note: Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is intended as guidance for safe handling, use, processing, storage, transportation, accidental release, clean-up and disposal and is not considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.