

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Bio-Fuel

SYNONYMS: Bio-Ethanol Fuel

CATALOG CODES: VEB

MANUFACTURER: Volu-Sol

ADDRESS: 5095 West 2100 South
Salt Lake City, UT 84120

EMERGENCY PHONE: (800) 535-5053

OTHER CALLS: (801) 974-9474

FAX: (801) 974-9553

CHEMICAL FAMILY: -

CHEMICAL FORMULA: -

PREPARED BY: Volu-Sol

RECOMMENDED USE: Bio-Fuel

RESTRICTIONS ON USE: Refer to the alcohol control authority in country in which the product is to be used – Canada Revenue Agency (Excise) in Canada, US Tax and Trade Bureau in US, etc.

SECTION 2: HAZARD(S) IDENTIFICATION

EMERGENCY OVERVIEW:

GHS Classification: Flammable Liquids (Category 2)
Eye irritation (Category 2A)

GHS LABEL ELEMENTS:

Pictogram:



Signal Word:

Danger

Hazard Statement(s):

H225 Highly flammable liquid and vapour
H319 Causes serious eye irritation

Precautionary Statement(s):

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking
P233 Keep container tightly closed
P240 Ground/bond container and receiving equipment
P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment
P242 Use only non-sparking tools
P243 Take precautionary measures against static discharge
P264 Wash hands thoroughly after handling
P273 Avoid release to the environment
P280 Wear protective gloves/ eye protection/ face protection
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical attention
P337+P313 If eye irritation persists: Get medical attention
P370+P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction
P403+P235 Store in a well-ventilated place. Keep cool
P501 Dispose of contents/container to an approved waste disposal plant

OTHER HAZARDS: -

HMIS Classification:

Health hazard: 2
Chronic health hazard: -
Flammability: 3
Physical hazards: 0

NFPA Rating:

Health hazard: 2
Fire: 3
Reactivity Hazard: 0

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT	CAS NO. EC-NO. Index-NO.
Ethanol (95.22%)	64-17-5 200-578-6 603-002-00-5
Isopropyl Alcohol (4.76%)	67-63-0 200-661-7 603-117-00-0
Tert-Butyl alcohol (<1%)	75-65-0 200-889-7 603-005-00-1
Denatonium benzoate (<1%)	3734-33-6 223-095-2

SECTION 4: FIRST AID MEASURES

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Consult a physician

INGESTION: If swallowed, vomiting may occur spontaneously, but DO NOT INDUCE. If vomiting occurs, keep head below hips to prevent aspiration into lungs. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician

SKIN: Wash off with soap and plenty of water. Consult a physician

EYE: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. If irritation occurs, seek medical attention

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABLE LIMITS IN AIR: Percentage by Volume
Upper: -%
Lower: -%

FLASH POINT: 13°C (57°F) – closed cup

AUTOIGNITION TEMPERATURE: -

EXTINGUISHING MEDIA: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide

FIRE FIGHTING PROCEDURES: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode

FIRE AND EXPLOSION HAZARDS: Use water spray to cool unopened containers

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES: Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations

SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE: Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use explosion-proof equipment. Keep away from sources of ignition - No smoking. Take measures to prevent the buildup of electrostatic charge. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage

INCOMPATIBILITIES: -

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE LIMITS: Reported in a time-weighted average (TWA)

Component	CAS-No.	Reference	OSHA		ACGIH	
			ppm	mg/m ³	ppm	mg/m ³
Ethanol	64-17-5		1,000	1,900	1,000	1,900

			PEL	PEL	TLV	TLV
Isopropyl Alcohol	67-63-0		400 PEL	980 PEL	400 TLV	
Tert-Butyl alcohol	75-65-0		100 PEL	300 PEL	100 TLV	

VENTILATION SYSTEM: Local and/or general exhaust is recommended to keep exposure below limits. Local exhaust ventilation is preferred for control of the emissions at its source, preventing dispersion into the general work area. Please refer to the ACGIH document, *Industrial Ventilation: A Manual of Recommended Practices*, for details

PERSONAL RESPIRATORS: Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Prevent further leakage or spillage if safe to do so. Do not let product enter drains

SKIN PROTECTION: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands

EYE PROTECTION: Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	liquid
ODOR:	Typical ethanol/ lower alcohol odor
SOLUBILITY:	-
pH:	-
BOILING POINT:	-
MELTING POINT:	-
VAPOR PRESSURE:	-
SPECIFIC GRAVITY:	-
MOLECULAR WEIGHT:	-
DENSITY:	-
VISCOSITY:	-
REFRACTIVE INDEX:	-

SECTION 10: STABILITY AND REACTIVITY

CHEMICAL STABILITY:	Stable under recommended conditions of use and storage
CONDITIONS TO AVOID:	Heat, flames, ignition sources
HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:	No data available

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION:	
Acute Toxicity:	No data available
Skin/Eye Irritation:	No data available
Carcinogenicity:	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC, NTP or OSHA
ROUTES OF ENTRY:	Inhalation/Ingestion/Skin

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION:	
Toxicity:	No data available
Persistence and degradability:	No data available
Mobility in soil:	No data available
PBT/vPvB Results:	PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dispose of as unused product

SECTION 14: TRANSPORT INFORMATION

US DOT	IATA	IMDG/IMO
Shipping Name: Alcohols, n.o.s. (Ethanol, Isopropanol)	Shipping Name: Alcohols, n.o.s. (Ethanol, Isopropanol)	Shipping Name: Alcohols, n.o.s. (Ethanol, Isopropanol)
Hazard Class: 3	Hazard Class: 3	Hazard Class: 3
UN Number: 1987	UN Number: 1987	UN Number: 1987
Packing Group: II	Packing Group: II	Packing Group: II

SECTION 15: REGULATORY INFORMATION

SARA 302	-
SARA 313	67-63-0
SARA 311/312 Hazards	Fire hazard, Acute Health Hazard, Chronic Health Hazard
State	Right to know lists: MA: 64-17-5, 67-63-0 PA: 64-17-5, 67-63-0, 3734-33-6, 75-65-0 NJ: 64-17-5, 67-63-0 California Prop. 65 Components:

SECTION 16: OTHER INFORMATION

Disclaimer: The information is provided without any representation or warranty, express or implied, regarding the accuracy or correctness. The conditions or methods of handling, storage, use, and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage, or expense arising out of or in any way connected with the handling, storage, use, or disposal of the product.