

SAFETY DATA SHEET

BC HVO Biodiesel

Version 1.1

Revision Date 16.08.2023

Print Date 23.08.2023

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : BC HVO Biodiesel

Product code : X3605, X3462

Synonyms : Renewable Hydrocarbons (Diesel Type Fraction)

CAS-No. : 928771-01-1

Manufacturer or supplier's details

Supplier : SHELL EASTERN CHEMICALS (S)
A REGISTERED BUSINESS OF SHELL EASTERN
TRADING (PTE) LTD (UEN:198902087C)
9 North Buona Vista Drive , #07-01
The Metropolis Tower 1
Singapore 138588
Singapore

Telephone : +65 6384 8269

Telefax : +65 6384 8454

Contact for Safety Data Sheet :

Emergency telephone number : +800 2537 8747 (ALERT SGS- toll Free) or +65 6542 9595 (ALERT SGS)

Recommended use of the chemical and restrictions on use

Recommended use : Fuel for use in diesel powered engines.

Restrictions on use : This product must not be used in applications other than those listed in Section 1 without first seeking the advice of the supplier.



2. HAZARDS IDENTIFICATION

GHS Classification

Flammable liquids : Category 3

Aspiration hazard : Category 1

GHS label elements

Hazard pictograms :  

Signal word : Danger

SAFETY DATA SHEET

BC HVO Biodiesel

Version 1.1

Revision Date 16.08.2023

Print Date 23.08.2023

Hazard statements : PHYSICAL HAZARDS:
H226 Flammable liquid and vapour.
HEALTH HAZARDS:
H304 May be fatal if swallowed and enters airways.
ENVIRONMENTAL HAZARDS:
Not classified as an environmental hazard under GHS criteria.

Precautionary statements :
Prevention:
P210 Keep away from heat/ sparks/ open flames/ hot surfaces.
No smoking.
P243 Take precautionary measures against static discharge.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
P370 + P378 In case of fire: Use appropriate media to extinguish.
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P331 Do NOT induce vomiting.
Storage:
P403 + P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.
Disposal:
P501 Dispose of contents and container to appropriate waste site or reclaimer in accordance with local and national regulations.

Other hazards which do not result in classification

Slightly irritating to respiratory system. High concentrations may cause central nervous system depression resulting in headaches, dizziness and nausea. Repeated exposure may cause skin dryness or cracking. May ignite on surfaces at temperatures above auto-ignition temperature. Vapour in the headspace of tanks and containers may ignite and explode at temperatures exceeding auto-ignition temperature, where vapour concentrations are within the flammability range. Electrostatic charges may be generated during pumping. Electrostatic discharge may cause fire. This material is a static accumulator. Even with proper grounding and bonding, this material can still accumulate an electrostatic charge. If sufficient charge is allowed to accumulate, electrostatic discharge and ignition of flammable air-vapour mixtures can occur.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance
Chemical nature : A mixture of hydrocarbons, containing straight and branched alkanes produced by synthesis from biomass and subsequent

SAFETY DATA SHEET

BC HVO Biodiesel

Version 1.1

Revision Date 16.08.2023

Print Date 23.08.2023

hydrotreatment.

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (% w/w)
Renewable hydrocarbons, diesel type fraction (Alkanes, C10-20-branched and linear)	928771-01-1	Asp. Tox.1; H304 Flam. Liq.4; H227	100

For explanation of abbreviations see section 16.

4. FIRST-AID MEASURES

- General advice : Not expected to be a health hazard when used under normal conditions.
- If inhaled : No treatment necessary under normal conditions of use.
If symptoms persist, obtain medical advice.
- In case of skin contact : Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available.
If persistent irritation occurs, obtain medical attention.
- In case of eye contact : Flush eye with copious quantities of water.
Remove contact lenses, if present and easy to do. Continue rinsing.
If persistent irritation occurs, obtain medical attention.
- If swallowed : Call emergency number for your location / facility.
If swallowed, do not induce vomiting: transport to nearest medical facility for additional treatment. If vomiting occurs spontaneously, keep head below hips to prevent aspiration.
If any of the following delayed signs and symptoms appear within the next 6 hours, transport to the nearest medical facility: fever greater than 101° F (38.3°C), shortness of breath, chest congestion or continued coughing or wheezing.
- Most important symptoms and effects, both acute and delayed : Not considered to be an inhalation hazard under normal conditions of use.
Possible respiratory irritation signs and symptoms may include a temporary burning sensation of the nose and throat, coughing, and/or difficulty breathing.
- No specific hazards under normal use conditions.
Skin irritation signs and symptoms may include a burning sensation, redness, or swelling.
- No specific hazards under normal use conditions.
Eye irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blurred vision.

SAFETY DATA SHEET

BC HVO Biodiesel

Version 1.1

Revision Date 16.08.2023

Print Date 23.08.2023

If material enters lungs, signs and symptoms may include coughing, choking, wheezing, difficulty in breathing, chest congestion, shortness of breath, and/or fever.

If any of the following delayed signs and symptoms appear within the next 6 hours, transport to the nearest medical facility: fever greater than 101° F (38.3°C), shortness of breath, chest congestion or continued coughing or wheezing.

Defatting dermatitis signs and symptoms may include a burning sensation and/or a dried/cracked appearance.

Protection of first-aiders : When administering first aid, ensure that you are wearing the appropriate personal protective equipment according to the incident, injury and surroundings.

Notes to physician : Treat symptomatically.
Call a doctor or poison control center for guidance.
Potential for chemical pneumonitis.
Do not induce vomiting.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.

Unsuitable extinguishing media : Do not use water in a jet.

Specific hazards during firefighting : Hazardous combustion products may include:
A complex mixture of airborne solid and liquid particulates and gases (smoke).
Carbon monoxide.
Unidentified organic and inorganic compounds.
Carbon monoxide may be evolved if incomplete combustion occurs.
Will float and can be reignited on surface water.
Flammable vapours may be present even at temperatures below the flash point.

Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Keep adjacent containers cool by spraying with water.

Special protective equipment for firefighters : Proper protective equipment including chemical resistant gloves are to be worn; chemical resistant suit is indicated if large contact with spilled product is expected. Self-Contained Breathing Apparatus must be worn when approaching a fire in a confined space. Select fire fighter's clothing approved to relevant Standards (e.g. Europe: EN469).

SAFETY DATA SHEET

BC HVO Biodiesel

Version 1.1

Revision Date 16.08.2023

Print Date 23.08.2023

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Do not breathe fumes, vapour.
Do not operate electrical equipment.
- Environmental precautions : Shut off leaks, if possible without personal risks. Remove all possible sources of ignition in the surrounding area. Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers. Attempt to disperse the vapour or to direct its flow to a safe location for example by using fog sprays. Take precautionary measures against static discharge. Ensure electrical continuity by bonding and grounding (earthing) all equipment.
- Methods and materials for containment and cleaning up : For small liquid spills (< 1 drum), transfer by mechanical means to a labeled, sealable container for product recovery or safe disposal. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely.
For large liquid spills (> 1 drum), transfer by mechanical means such as vacuum truck to a salvage tank for recovery or safe disposal. Do not flush away residues with water. Retain as contaminated waste. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely
Shovel into a suitable clearly marked container for disposal or reclamation in accordance with local regulations.
- Avoid contact with skin, eyes and clothing.
Evacuate the area of all non-essential personnel.
Ventilate contaminated area thoroughly.
Take precautionary measures against static discharges.
Observe all relevant local and international regulations.
- Additional advice : For guidance on selection of personal protective equipment see Section 8 of this Safety Data Sheet.
For guidance on disposal of spilled material see Section 13 of this Safety Data Sheet.
Notify authorities if any exposure to the general public or the environment occurs or is likely to occur.
Local authorities should be advised if significant spillages cannot be contained.
Maritime spillages should be dealt with using a Shipboard Oil Pollution Emergency Plan (SOPEP), as required by MARPOL Annex 1 Regulation 26.

7. HANDLING AND STORAGE

- General Precautions : Avoid breathing of or direct contact with material. Only use in well ventilated areas. Wash thoroughly after handling. For guidance on selection of personal protective equipment see

SAFETY DATA SHEET

BC HVO Biodiesel

Version 1.1

Revision Date 16.08.2023

Print Date 23.08.2023

	<p>Section 8 of this Safety Data Sheet.</p> <p>Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.</p> <p>Air-dry contaminated clothing in a well-ventilated area before laundering.</p> <p>Properly dispose of any contaminated rags or cleaning materials in order to prevent fires.</p> <p>Prevent spillages.</p> <p>Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols.</p> <p>Never siphon by mouth.</p> <p>Contaminated leather articles including shoes cannot be decontaminated and should be destroyed to prevent reuse.</p> <p>For comprehensive advice on handling, product transfer, storage and tank cleaning refer to the product supplier.</p>
General Precautions	Maintenance and Fuelling Activities - Avoid inhalation of vapours and contact with skin.
Advice on safe handling	<p>: Ensure that all local regulations regarding handling and storage facilities are followed.</p> <p>Avoid inhaling vapour and/or mists.</p> <p>Avoid prolonged or repeated contact with skin.</p> <p>Extinguish any naked flames. Do not smoke. Remove ignition sources. Avoid sparks.</p> <p>Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols.</p> <p>Bulk storage tanks should be diked (bunded).</p> <p>When using do not eat or drink.</p> <p>The vapour is heavier than air, spreads along the ground and distant ignition is possible.</p> <p>Even with proper grounding and bonding, this material can still accumulate an electrostatic charge.</p> <p>If sufficient charge is allowed to accumulate, electrostatic discharge and ignition of flammable air-vapour mixtures can occur.</p> <p>Be aware of handling operations that may give rise to additional hazards that result from the accumulation of static charges.</p> <p>These include but are not limited to pumping (especially turbulent flow), mixing, filtering, splash filling, cleaning and filling of tanks and containers, sampling, switch loading, gauging, vacuum truck operations, and mechanical movements.</p> <p>These activities may lead to static discharge e.g. spark formation.</p> <p>Restrict line velocity during pumping in order to avoid generation of electrostatic discharge (≤ 1 m/s until fill pipe submerged to twice its diameter, then ≤ 7 m/s). Avoid splash filling.</p> <p>Do NOT use compressed air for filling, discharging, or handling operations.</p>

SAFETY DATA SHEET

BC HVO Biodiesel

Version 1.1

Revision Date 16.08.2023

Print Date 23.08.2023

- Avoidance of contact : Strong oxidising agents.
- Product Transfer : Avoid splash filling Wait 2 minutes after tank filling (for tanks such as those on road tanker vehicles) before opening hatches or manholes. Wait 30 minutes after tank filling (for large storage tanks) before opening hatches or manholes. Keep containers closed when not in use. Do not use compressed air for filling discharge or handling. Contamination resulting from product transfer may give rise to light hydrocarbon vapour in the headspace of tanks that have previously contained gasoline. This vapour may explode if there is a source of ignition. Partly filled containers present a greater hazard than those that are full, therefore handling, transfer and sampling activities need special care.

Storage

- Other data : Drum and small container storage:
Drums should be stacked to a maximum of 3 high.
Use properly labeled and closable containers.
Tank storage:
Tanks must be specifically designed for use with this product.
Bulk storage tanks should be diked (bunded).
Locate tanks away from heat and other sources of ignition.
Must be stored in a diked (bunded) well- ventilated area, away from sunlight, ignition sources and other sources of heat.
The vapour is heavier than air. Beware of accumulation in pits and confined spaces.
Electrostatic charges will be generated during pumping.
Electrostatic discharge may cause fire. Ensure electrical continuity by bonding and grounding (earthing) all equipment to reduce the risk.
The vapours in the head space of the storage vessel may lie in the flammable/explosive range and hence may be flammable.
Refer to section 15 for any additional specific legislation covering the packaging and storage of this product.

SAFETY DATA SHEET

BC HVO Biodiesel

Version 1.1

Revision Date 16.08.2023

Print Date 23.08.2023

Packaging material	: Suitable material: For containers, or container linings use mild steel, stainless steel., Aluminium may also be used for applications where it does not present an unnecessary fire hazard., Examples of suitable materials are: high density polyethylene (HDPE) and Viton (FKM), which have been specifically tested for compatibility with this product., For container linings, use amine-adduct cured epoxy paint., For seals and gaskets use: graphite, PTFE, Viton A, Viton B. Unsuitable material: Some synthetic materials may be unsuitable for containers or container linings depending on the material specification and intended use. Examples of materials to avoid are: natural rubber (NR), nitrile rubber (NBR), ethylene propylene rubber (EPDM), polymethyl methacrylate (PMMA), polystyrene, polyvinyl chloride (PVC), polyisobutylene., However, some may be suitable for glove materials.
Container Advice	: Containers, even those that have been emptied, can contain explosive vapours. Do not cut, drill, grind, weld or perform similar operations on or near containers.
Specific use(s)	: Not applicable See additional references that provide safe handling practices for liquids that are determined to be static accumulators: American Petroleum Institute 2003 (Protection Against Ignitions Arising out of Static, Lightning and Stray Currents) or National Fire Protection Agency 77 (Recommended Practices on Static Electricity). IEC/TS 60079-32-1: Electrostatic hazards, guidance Consult the technical guidelines for the use of this substance/mixture.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Components with workplace control parameters

None established.

Biological occupational exposure limits

No biological limit allocated.

Monitoring Methods

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate.

Validated exposure measurement methods should be applied by a competent person and samples analysed by an accredited laboratory.

Examples of sources of recommended exposure measurement methods are given below or contact the supplier. Further national methods may be available.

National Institute of Occupational Safety and Health (NIOSH), USA: Manual of Analytical Methods
<http://www.cdc.gov/niosh/>

SAFETY DATA SHEET

BC HVO Biodiesel

Version 1.1

Revision Date 16.08.2023

Print Date 23.08.2023

Occupational Safety and Health Administration (OSHA), USA: Sampling and Analytical Methods
<http://www.osha.gov/>
Health and Safety Executive (HSE), UK: Methods for the Determination of Hazardous Substances
<http://www.hse.gov.uk/>
Institut für Arbeitsschutz Deutschen Gesetzlichen Unfallversicherung (IFA) , Germany
<http://www.dguv.de/inhalt/index.jsp>
L'Institut National de Recherche et de Sécurité, (INRS), France <http://www.inrs.fr/accueil>

Engineering measures : The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include:
Use sealed systems as far as possible.
Firewater monitors and deluge systems are recommended.
Adequate explosion-proof ventilation to control airborne concentrations below the exposure guidelines/limits.
Local exhaust ventilation is recommended.
Eye washes and showers for emergency use.

General Information:

Always observe good personal hygiene measures, such as washing hands after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.
Define procedures for safe handling and maintenance of controls.
Educate and train workers in the hazards and control measures relevant to normal activities associated with this product.
Ensure appropriate selection, testing and maintenance of equipment used to control exposure, e.g. personal protective equipment, local exhaust ventilation.
Drain down system prior to equipment break-in or maintenance.
Retain drain downs in sealed storage pending disposal or subsequent recycle.
Do not ingest. If swallowed, then seek immediate medical assistance

Personal protective equipment

Protective measures

Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.

Respiratory protection : If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers.

SAFETY DATA SHEET

BC HVO Biodiesel

Version 1.1

Revision Date 16.08.2023

Print Date 23.08.2023

Where air-filtering respirators are suitable, select an appropriate combination of mask and filter.
Where air-filtering respirators are unsuitable (e.g. airborne concentrations are high, risk of oxygen deficiency, confined space) use appropriate positive pressure breathing apparatus. All respiratory protection equipment and use must be in accordance with local regulations.

Select a filter suitable for the combination of organic gases and vapours and particles [Type A/Type P boiling point >65°C (149°F)].

Hand protection Remarks

: Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection. Longer term protection: Nitrile rubber. Incidental contact/Splash protection: Neoprene rubber. PVC. For continuous contact we recommend gloves with breakthrough time of more than 240 minutes with preference for > 480 minutes where suitable gloves can be identified. For short-term/splash protection we recommend the same but recognize that suitable gloves offering this level of protection may not be available and in this case a lower breakthrough time maybe acceptable so long as appropriate maintenance and replacement regimes are followed. Glove thickness is not a good predictor of glove resistance to a chemical as it is dependent on the exact composition of the glove material. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended.

Eye protection

: If material is handled such that it could be splashed into eyes, protective eyewear is recommended.
If a local risk assessment deems it so then chemical splash goggles may not be required and safety glasses may provide adequate eye protection.

Skin and body protection

: Wear chemical resistant gloves/gauntlets and boots. Where risk of splashing, also wear an apron.

Environmental exposure controls

General advice

: Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containing vapour.
Minimise release to the environment. An environmental assessment must be made to ensure compliance with local environmental legislation.

SAFETY DATA SHEET

BC HVO Biodiesel

Version 1.1

Revision Date 16.08.2023

Print Date 23.08.2023

Information on accidental release measures are to be found in section 6.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: liquid
Colour	: colourless
Odour	: mild
Odour Threshold	: Data not available
pH	: Not applicable
Melting point/freezing point	: no data available
pour point	no data available
Initial boiling point and boiling range	: 180 - 320 °C / 356 - 608 °F
Flash point	: > 55 °C / 131 °F Method: Unspecified
Evaporation rate	: Data not available
Upper explosion limit	: 5 %(V)
Lower explosion limit	: 0.5 %(V)
Vapour pressure	: < 1 kPa (25.0 °C / 77.0 °F) Method: Unspecified
Relative vapour density	: > 4
Relative density	: Data not available
Density	: 780 kg/m ³ (15.0 °C / 59.0 °F)
Solubility(ies)	
Water solubility	: negligible
Solubility in other solvents	: Data not available
Partition coefficient: n-octanol/water	: log Pow: > 6.5
Auto-ignition temperature	: ca. 210 °C / 410 °F
Decomposition temperature	: Data not available
Viscosity	
Viscosity, kinematic	: 2 - 4 mm ² /s (40.0 °C / 104.0 °F)

SAFETY DATA SHEET

BC HVO Biodiesel

Version 1.1

Revision Date 16.08.2023

Print Date 23.08.2023

Oxidizing properties : Data not available

Conductivity : Low conductivity: < 100 pS/m, The conductivity of this material makes it a static accumulator., A liquid is typically considered nonconductive if its conductivity is below 100 pS/m and is considered semi-conductive if its conductivity is below 10,000 pS/m., Whether a liquid is nonconductive or semiconductive, the precautions are the same., A number of factors, for example liquid temperature, presence of contaminants, and anti-static additives can greatly influence the conductivity of a liquid

10. STABILITY AND REACTIVITY

Reactivity : The product does not pose any further reactivity hazards in addition to those listed in the following sub-paragraph.

Chemical stability : No hazardous reaction is expected when handled and stored according to provisions

Possibility of hazardous reactions : Reacts with strong oxidising agents.

Conditions to avoid : Avoid heat, sparks, open flames and other ignition sources.

In certain circumstances product can ignite due to static electricity.

Incompatible materials : Strong oxidising agents.

Hazardous decomposition products : Hazardous decomposition products are not expected to form during normal storage.
Thermal decomposition is highly dependent on conditions. A complex mixture of airborne solids, liquids and gases including carbon monoxide, carbon dioxide, sulphur oxides and unidentified organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation.

11. TOXICOLOGICAL INFORMATION

Basis for assessment : Information given is based on data on the components and the toxicology of similar products. Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).

Information on likely routes of exposure : Inhalation is the primary route of exposure.

Acute toxicity

SAFETY DATA SHEET

BC HVO Biodiesel

Version 1.1

Revision Date 16.08.2023

Print Date 23.08.2023

Product:

- Acute oral toxicity : LD50 Oral Rat: > 5,000 mg/kg
Remarks: Low toxicity
- Acute inhalation toxicity : Remarks: Low toxicity if inhaled.
Based on available data, the classification criteria are not met.
- Acute dermal toxicity : Rabbit:
Remarks: LD50 >2000 mg/kg
Low toxicity
Based on available data, the classification criteria are not met.

Skin corrosion/irritation

Product:

Remarks: Slightly irritating to skin., Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation

Product:

Remarks: Slightly irritating to the eye., Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation

Product:

Test Method: Skin sensitisation
Remarks: Not a sensitiser.
Based on available data, the classification criteria are not met.

Test Method: Respiratory sensitisation
Remarks: Not a sensitiser.
Based on available data, the classification criteria are not met.

Germ cell mutagenicity

Product:

: Remarks: Not mutagenic.

Carcinogenicity

Product:

Remarks: Not a carcinogen., Based on available data, the classification criteria are not met.

Material	GHS/CLP Carcinogenicity Classification
Renewable hydrocarbons, diesel type fraction (Alkanes, C10-20-branched and linear)	No carcinogenicity classification.

SAFETY DATA SHEET

BC HVO Biodiesel

Version 1.1

Revision Date 16.08.2023

Print Date 23.08.2023

Reproductive toxicity

Product:

:
Remarks: Not a developmental toxicant., Does not impair fertility., Based on available data, the classification criteria are not met.

STOT - single exposure

Product:

Remarks: Inhalation of vapours or mists may cause irritation to the respiratory system., High concentrations may cause central nervous system depression resulting in headaches, dizziness and nausea.

STOT - repeated exposure

Product:

Remarks: Repeated exposure may cause skin dryness or cracking.

Aspiration toxicity

Product:

Aspiration into the lungs when swallowed or vomited may cause chemical pneumonitis which can be fatal.

Further information

Product:

Remarks: Classifications by other authorities under varying regulatory frameworks may exist.

12. ECOLOGICAL INFORMATION

Basis for assessment : Information given is based on product testing.

Ecotoxicity

Product:

Toxicity to fish (Acute toxicity) :
Remarks: LL/EL/IL50 > 100 mg/l
Practically non toxic:
Based on available data, the classification criteria are not met.

Toxicity to crustacean (Acute toxicity) :
Remarks: LL/EL/IL50 > 100 mg/l

SAFETY DATA SHEET

BC HVO Biodiesel

Version 1.1

Revision Date 16.08.2023

Print Date 23.08.2023

Practically non toxic:
Based on available data, the classification criteria are not met.

Toxicity to algae/aquatic plants (Acute toxicity) :
Remarks: LL/EL/IL50 > 100 mg/l
Practically non toxic:
Based on available data, the classification criteria are not met.

Toxicity to fish (Chronic toxicity) : Remarks: NOEC/NOEL > 100 mg/l

Toxicity to crustacean (Chronic toxicity) : Remarks: NOEC/NOEL > 10 - <=100 mg/l

Toxicity to microorganisms (Acute toxicity) : Remarks: LL/EL/IL50 > 100 mg/l
Practically non toxic:
Based on available data, the classification criteria are not met.

Persistence and degradability

Product:

Biodegradability : Remarks: Readily biodegradable.

Remarks: Not Persistent per IMO criteria., International Oil Pollution Compensation (IOPC) Fund definition: "A non-persistent oil is oil, which, at the time of shipment, consists of hydrocarbon fractions, (a) at least 50% of which, by volume, distills at a temperature of 340°C (645°F) and (b) at least 95% of which, by volume, distills at a temperature of 370°C (700°F) when tested by the ASTM Method D-86/78 or any subsequent revision thereof."

Bioaccumulative potential

Product:

Bioaccumulation : Remarks: Contains constituents with the potential to bioaccumulate.

Partition coefficient: n-octanol/water : log Pow: > 6.5

Mobility in soil

Product:

Mobility : Remarks: Large volumes may penetrate soil and could contaminate groundwater., Floats on water., Partly evaporates from water or soil surfaces, but a significant proportion will remain after one day.

Other adverse effects

no data available

Product:

Additional ecological information : Films formed on water may affect oxygen transfer and damage organisms.

SAFETY DATA SHEET

BC HVO Biodiesel

Version 1.1

Revision Date 16.08.2023

Print Date 23.08.2023

13. DISPOSAL CONSIDERATIONS

Disposal methods

- Waste from residues : Recover or recycle if possible.
It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations.
Do not dispose into the environment, in drains or in water courses.
Do not dispose of tank water bottoms by allowing them to drain into the ground. This will result in soil and groundwater contamination.
Waste arising from a spillage or tank cleaning should be disposed of in accordance with prevailing regulations, preferably to a recognised collector or contractor. The competence of the collector or contractor should be established beforehand.
MARPOL - see International Convention for the Prevention of Pollution from Ships (MARPOL 73/78) which provides technical aspects at controlling pollutions from ships.
- Contaminated packaging : Send to drum recoverer or metal reclaimers.
Drain container thoroughly.
After draining, vent in a safe place away from sparks and fire.
Residues may cause an explosion hazard if heated above the flash point. Do not puncture, cut or weld uncleaned drums.
Do not pollute the soil, water or environment with the waste container.
Comply with any local recovery or waste disposal regulations.

14. TRANSPORT INFORMATION

International Regulations

ADR

- UN number : 1202
Proper shipping name : DIESEL FUEL
Class : 3
Packing group : III
Labels : 3
Hazard Identification Number : 30
Environmentally hazardous : no

IATA-DGR

- UN/ID No. : UN 1202
Proper shipping name : DIESEL FUEL
Class : 3
Packing group : III

SAFETY DATA SHEET

BC HVO Biodiesel

Version 1.1

Revision Date 16.08.2023

Print Date 23.08.2023

Labels : 3

IMDG-Code

UN number : UN 1202

Proper shipping name : DIESEL FUEL

Class : 3

Packing group : III

Labels : 3

Marine pollutant : no

Maritime transport in bulk according to IMO instruments

MARPOL Annex 1 rules apply for bulk shipments by sea.

Special precautions for user

Remarks : Special Precautions: Refer to Section 7, Handling & Storage, for special precautions which a user needs to be aware of or needs to comply with in connection with transport.

Additional Information : For bulk shipping this product has been classified under Annex I (Energy Rich Fuels).

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

Local Regulations

Workplace Safety and Health Act & Workplace Safety and Health (General Provision) Regulations	This product is subject to the requirements in the Act/ Regulations.
Fire Safety Act and Fire Safety (Petroleum & Flammable Materials) Regulations	This product is subject to the requirements in the Act/ Regulations.
Maritime and Port Authority of Singapore (Dangerous Goods, Petroleum and Explosives) Regulations	This product is subject to the requirements in the Act/ Regulations.
Environmental Protection and Management Act and Environmental Protection and Management (Hazardous Substances) Regulations	This product is subject to the requirements in the Act/ Regulations.

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

16. OTHER INFORMATION

SAFETY DATA SHEET

BC HVO Biodiesel

Version 1.1

Revision Date 16.08.2023

Print Date 23.08.2023

Full text of H-Statements

H227	Combustible liquid.
H304	May be fatal if swallowed and enters airways.

Full text of other abbreviations

Asp. Tox.	Aspiration hazard
Flam. Liq.	Flammable liquids

Abbreviations and Acronyms

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECL - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

Further information

Other information : This product is intended for use in closed systems only.

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 given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be 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.

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