

Safety Data Sheet

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

Material Name	:	Bitufresh
Recommended Use / Restrictions of Use	:	
Product Code	:	
Manufacturer/Supplier	:	Z Energy Limited 3 Queens Wharf Wellington New Zealand
Telephone	:	+64 4 472 0080
Fax	:	+64 4 498 0260
Local Contact		
Telephone	:	0800 474 355
Fax	:	0800 100 536
email	:	general@z-energy.co.nz
Emergency Telephone Number	:	0800 243 622 (24 hours) / (International) +64 4 917 9888

2. HAZARDS IDENTIFICATION


HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS.

Classified as hazardous according to criteria in the Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001.

Not classified as Dangerous Goods for transport, according to New Zealand Standard 5433:2007 Transport of Dangerous Goods on Land.

Hazardous Substances Classification	:	6.3A, 6.5B, 9.1C
GHS Classification	:	SKIN CORROSION/IRRITATION, Category 2 SKIN SENSITIZATION, Category 1 AQUATIC TOXICITY (CHRONIC), Category 3 SERIOUS EYE DAMAGE/IRRITATION, Category 2A
GHS Label Elements		
Signal Words	:	Warning
GHS Hazard Statements	:	PHYSICAL HAZARDS: Not classified as a physical hazard under GHS criteria. HEALTH HAZARDS: Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation.

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	: ENVIRONMENTAL HAZARDS: Harmful to aquatic life with long lasting effects.
GHS Precautionary Statements	: PREVENTION: Wash hands thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Avoid breathing dust/fume/gas/mist/vapours/spray. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. : RESPONSE: IF ON SKIN: Wash with plenty of soap and water. Specific treatment (see details on this label). If skin irritation occurs: Get medical advice/ attention. Take off contaminated clothing and wash before re-use. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before re-use. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. : STORAGE: No precautionary phrases. : DISPOSAL: Dispose of contents and container to appropriate waste site or reclaimer in accordance with local and national regulations.
Symbol(s) :	: 
Other Hazards which do not result in Classification	: Not classified as flammable but will burn.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Preparation description : Highly refined mineral oils and additives.

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Chemical Identity	CAS	Identification No.	Conc.
D-Limonene	5989-27-5	227-813-5	> 0.10 - < 0.99 %
Eugenol	97-53-0		> 1.00 - < 5.00 %
Geraniol	106-24-1		> 1.00 - < 5.00 %
Linalool	78-70-6		> 1.00 - < 5.00 %
Additional Information	: The highly refined mineral oil contains <3% (w/w) DMSOextract, according to IP346.		

4. FIRST AID MEASURES

General Information	: Not expected to be a health hazard when used under normal conditions.
Inhalation	: No treatment necessary under normal conditions of use. If symptoms persist, obtain medical advice.
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.
Eye Contact	: Flush eye with copious quantities of water. If persistent irritation occurs, obtain medical attention.
Ingestion	: In general no treatment is necessary unless large quantities are swallowed, however, get medical advice.
Most Important Symptoms/Effects, Acute & Delayed	: Oil acne/folliculitis signs and symptoms may include formation of black pustules and spots on the skin of exposed areas. Ingestion may result in nausea, vomiting and/or diarrhoea.
Immediate medical attention, special treatment	: Treat symptomatically.

5. FIRE FIGHTING MEASURES

Clear fire area of all non-emergency personnel.

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 arising	: Hazardous combustion products may include: A

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from Chemicals	complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide. Unidentified organic and inorganic compounds.
Protective Equipment & Precautions for Fire Fighters	: Proper protective equipment including breathing apparatus must be worn when approaching a fire in a confined space.

6. ACCIDENTAL RELEASE MEASURES

Avoid contact with spilled or released material. For guidance on selection of personal protective equipment see Chapter 8 of this Material Safety Data Sheet. See Chapter 13 for information on disposal. Observe all relevant local and international regulations.

Personal Precautions, Protective Equipment and Emergency Procedures	: Avoid contact with skin and eyes.
Environmental Precautions	: Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers.
Methods and Material for Containment and Clean Up	: Slippery when spilt. Avoid accidents, clean up immediately. Prevent from spreading by making a barrier with sand, earth or other containment material. Reclaim liquid directly or in an absorbent. Soak up residue with an absorbent such as clay, sand or other suitable material and dispose of properly.
Additional Advice	: Local authorities should be advised if significant spillages cannot be contained.

7. HANDLING AND STORAGE

General Precautions	: Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols. Properly dispose of any contaminated rags or cleaning materials in order to prevent fires. 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.
Precautions for Safe Handling	: Avoid prolonged or repeated contact with skin. Avoid inhaling vapour and/or mists. When handling product in drums, safety footwear should be worn and proper handling

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equipment should be used.

- Conditions for Safe Storage** : Keep container tightly closed and in a cool, well-ventilated place. Use properly labelled and closeable containers. Storage Temperature: 0 - 50°C / 32 - 122°F
- Recommended Materials** : For containers or container linings, use mild steel or high density polyethylene.
- Unsuitable Materials** : PVC.
- Other Advice** : Polyethylene containers should not be exposed to high temperatures because of possible risk of distortion.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

Material	Source	Type	ppm	mg/m3	Notation
Oil mist, mineral	NZ OEL	TWA [Mist.]		5	
	NZ OEL	STEL [Mist.]		10	

Biological Exposure Index (BEI) - See reference for full details

Data not available

- Appropriate Engineering Controls** : 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: Adequate ventilation to control airborne concentrations. Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated.
- Individual Protection Measures** : Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.
- Respiratory Protection** : No respiratory protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material. 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.

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Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for combined particulate/organic gases and vapours [boiling point >65°C (149 °F)].

Hand Protection	:	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: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, 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	:	Wear safety glasses or full-face shield if splashes are likely to occur.
Protective Clothing	:	Skin protection not ordinarily required beyond standard issue work clothes.
Thermal Hazards	:	Not applicable.
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.
Environmental Exposure Controls	:	Minimise release to the environment. An environmental assessment must be made to ensure compliance with local environmental legislation.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Yellow-orange. Liquid at room temperature.
Odour	:	Slight hydrocarbon
Odour threshold	:	Data not available
pH	:	Not applicable
Initial Boiling Point and Boiling Range	:	> 280 °C / 536 °F estimated value(s)

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Freezing point	:	Data not available
Flash point	:	> 61 °C / 142 °F (Cleveland Open Cup)
Upper / lower Flammability or Explosion limits	:	Typical 1 - 10 %(V) (based on mineral oil)
Auto-ignition temperature	:	> 320 °C / 608 °F
Vapour pressure	:	< 0.5 Pa at 20 °C / 68 °F (estimated value(s))
Relative Density	:	Data not available
Density	:	Data not available
Water solubility	:	Negligible.
Solubility in other solvents	:	Data not available
n-octanol/water partition coefficient (log Pow)	:	> 6 (based on information on similar products)
Dynamic viscosity	:	Data not available
Kinematic viscosity	:	Data not available
Vapour density (air=1)	:	> 1 (estimated value(s))
Evaporation rate (nBuAc=1)	:	Data not available
Decomposition Temperature	:	Data not available
Flammability	:	Data not available

10. STABILITY AND REACTIVITY

Chemical Stability	:	Stable.
Possibility of Hazardous Reactions	:	Data not available
Conditions to Avoid	:	Extremes of temperature and direct sunlight.
Incompatible Materials	:	Strong oxidising agents.
Hazardous Decomposition Products	:	Hazardous decomposition products are not expected to form during normal storage.

11. TOXICOLOGICAL INFORMATION

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Basis for Assessment	:	
Likely Routes of Exposure	:	Skin and eye contact are the primary routes of exposure although exposure may occur following accidental ingestion.
Acute Oral Toxicity	:	Expected to be of low toxicity: LD50 > 5000 mg/kg , Rat
Acute Dermal Toxicity	:	Expected to be of low toxicity: LD50 > 5000 mg/kg , Rabbit
Acute Inhalation Toxicity	:	Not considered to be an inhalation hazard under normal conditions of use.
Skin Corrosion/Irritation	:	Causes mild skin irritation. Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.
Serious Eye Damage/Irritation	:	Expected to be irritating to eyes.
Respiratory Irritation	:	Inhalation of vapours or mists may cause irritation.
Respiratory or Skin Sensitisation	:	May cause an allergic skin reaction in sensitive individuals.
Aspiration Hazard	:	Not considered an aspiration hazard.
Repeated Dose Toxicity	:	Not expected to be a hazard.
Germ Cell Mutagenicity	:	Not considered a mutagenic hazard.
Carcinogenicity	:	Product contains mineral oils of types shown to be noncarcinogenic in animal skin-painting studies. Highly refined mineral oils are not classified as carcinogenic by the International Agency for Research on Cancer (IARC). Other components are not known to be associated with carcinogenic effects.
Reproductive and Developmental Toxicity	:	Not expected to be a hazard.

12. ECOLOGICAL INFORMATION

Basis for Assessment	:	Ecotoxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and the ecotoxicology of similar products.
Acute Toxicity	:	Poorly soluble mixture. May cause physical fouling of aquatic organisms. Expected to be harmful: LL/EL/IL50 10-100 mg/l(to aquatic organisms)(LL/EL50 expressed

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as the nominal amount of product required to prepare aqueous test extract).

- Microorganisms** : Data not available
- Mobility** : Liquid under most environmental conditions. Floats on water. If it enters soil, it will adsorb to soil particles and will not be mobile.
- Persistence/degradability** : Expected to be not readily biodegradable. Major constituents are expected to be inherently biodegradable, but the product contains components that may persist in the environment.
- Bioaccumulative Potential** : Contains components with the potential to bioaccumulate.
- Other Adverse Effects** : Product is a mixture of non-volatile components, which are not expected to be released to air in any significant quantities. Not expected to have ozone depletion potential, photochemical ozone creation potential or global warming potential.

13. DISPOSAL CONSIDERATIONS

- Material Disposal** : 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.
- Container Disposal** : Dispose in accordance with prevailing regulations, preferably to a recognised collector or contractor. The competence of the collector or contractor should be established beforehand.
- Local Legislation** : Disposal should be in accordance with the New Zealand Hazardous Substances Disposal Regulations 2001. Treat the substance using a method that changes the characteristics or composition of the substance so that the substance is no longer a hazardous substance.

14. TRANSPORT INFORMATION

NZS 5433:2007

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This material is not classified as dangerous according to NZS 5433:2007.

IMDG

This material is not classified as dangerous under IMDG regulations.

IATA (Country variations may apply)

This material is not classified as dangerous under IATA regulations.

15. REGULATORY INFORMATION

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

HSNO Approval Number	:	HSR002578
Other Information	:	New Zealand Workplace Exposure Limits 2002 (WES). New Zealand Standard 5433:2007 Transport of Dangerous Goods on Land.

16. OTHER INFORMATION

SDS Version Number	:	1.1
SDS Effective Date	:	01 October 2015
SDS Regulation	:	The content and format of this SDS is in accordance with HSNO Approved Code of Practice (No. HSNO CoP 8-1 09-06): Preparation of Safety Data Sheets.
SDS Distribution	:	The information in this document should be made available to all who may handle the product.
Disclaimer	:	This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.