1 Identification

· Product identifier

· Trade name: YUZU FLAVOR EXTRACT

· Article number: BALK / 92.3049

· Details of the supplier of the safety data sheet

· Manufacturer/Supplier: OliveNation LLC 13 Robbie Road A4 Avon, MA 02322

USA

617-580-3667

- · Information department: Regulatory Department
- · Emergency telephone number:

During normal opening times: Call Chemtrec Day or Night

Domestic North America 800.424.9300/International 703.527.3887 (Collect calls accepted)

2 Hazard(s) identification

· Classification of the substance or mixture



GHS02 Flame

Flammable Liquids 3 H226 Flammable liquid and vapor.



GHS08 Health hazard

Carcinogenicity 1A H350 May cause cancer.



GHS07

Sensitization - Skin 1 H317 May cause an allergic skin reaction.

- · Label elements
- · GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
- · Hazard pictograms







GHS02

GHS07

- · Signal word Danger
- · Hazard-determining components of labeling:

ETHYL ALCOHOL GRAPEFRUIT OIL ORANGE OIL

LEMON OIL

· Hazard statements

Flammable liquid and vapor.

May cause an allergic skin reaction.

(Contd. on page 2)

Trade name: YUZU FLAVOR EXTRACT

(Contd. of page 1)

May cause cancer.

· Precautionary statements

Obtain special instructions before use.

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

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Keep container tightly closed.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting/equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Avoid breathing dust/fume/gas/mist/vapors/spray

Contaminated work clothing must not be allowed out of the workplace.

Wear protective gloves/protective clothing/eye protection/face protection.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF exposed or concerned: Get medical advice/attention.

Specific treatment (see on this label).

If skin irritation or rash occurs: Get medical advice/attention.

Wash contaminated clothing before reuse.

In case of fire: Use CO2, powder or water spray to extinguish.

Store in a well-ventilated place. Keep cool.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

- · Classification system:
- · NFPA ratings (scale 0 4)



Health = 0 Fire = 3Reactivity = 0

· HMIS-ratings (scale 0 - 4)



Health = *1 *Fire* = 3

Reactivity = 0

- · Other hazards
- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.

3 Composition/information on ingredients

- · Chemical characterization: Mixtures
- · Description: Mixture of the substances listed below with nonhazardous additions.

· Dangerous components:		
57-55-6	PROPYLENE GLYCOL	>50-≤100%
	♦ Acute Toxicity - Oral 4, H302	
64-17-5	ETHYL ALCOHOL	>10-≤25%
	🚸 Flammable Liquids 2, H225; 🗞 Carcinogenicity 1A, H350	
	GRAPEFRUIT OIL	≥1-≤2.5%
	♦ Flammable Liquids 3, H226; ♦ Aspiration Hazard 1, H304; ♦ Skin Irrititation 2, H315; Sensitization - Skin 1, H317	

Trade name: YUZU FLAVOR EXTRACT

		(Contd. of page 2)
8008-57-9	ORANGE OIL	≥0.1-<1%
	♠ Flammable Liquids 3, H226; ♦ Aspiration Hazard 1, H304; ♠ Skin Irrititation 2, H315; Sensitization - Skin 1, H317	
8008-56-8	LEMON OIL	≥0.1-<1%
	♦ Flammable Liquids 3, H226; ♦ Aspiration Hazard 1, H304; ♦ Skin Irrititation 2, H315; Sensitization - Skin 1, H317	

4 First-aid measures

- · Description of first aid measures
- · General information: Immediately remove any clothing soiled by the product.
- · After inhalation:

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

- · After skin contact: Immediately wash with water and soap and rinse thoroughly.
- · After eve contact: Rinse opened eye for several minutes under running water.
- · After swallowing: If symptoms persist consult doctor.
- Information for doctor:
- · Most important symptoms and effects, both acute and delayed No further relevant information available.
- · Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- Suitable extinguishing agents:

CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

- · Special hazards arising from the substance or mixture No further relevant information available.
- · Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

· Environmental precautions:

Dilute with plenty of water.

Do not allow to enter sewers/surface or ground water.

· Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

· Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

· Protective Action Criteria for Chemicals

· PAC-1:

57-55-6 PROPYLENE GLYCOL

 30 mg/m^3

Trade name: YUZU FLAVOR EXTRACT

		(Contd. of page 3
64-17-5	ETHYL ALCOHOL	1,800 ppm
141-78-6	ETHYL ACETATE	1,200 ppm
· PAC-2:		
57-55-6	PROPYLENE GLYCOL	$1,300 \text{ mg/m}^3$
64-17-5	ETHYL ALCOHOL	3300* ppm
141-78-6	ETHYL ACETATE	1,700 ppm
· PAC-3:		
57-55-6	PROPYLENE GLYCOL	$7,900 \text{ mg/m}^3$
64-17-5	ETHYL ALCOHOL	15000* ppm
141-78-6	ETHYL ACETATE	10000** ppm

7 Handling and storage

- · Handling:
- · Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Prevent formation of aerosols.

· Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Keep respiratory protective device available.

- · Conditions for safe storage, including any incompatibilities
- Storage:
- · Requirements to be met by storerooms and receptacles:

Store in a tightly sealed containers in a cool, dry place that is well ventilated. Away from heat, spark, and open flame.

- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: Keep receptacle tightly sealed.
- · Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- · Additional information about design of technical systems: No further data; see item 7.
- · Control parameters
- · Components with limit values that require monitoring at the workplace:

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.

At this time, the other constituents have no known exposure limits.

57-55-	6 PROPYLENE GLYCOL
WEEL	Long-term value: 10 mg/m³
64-17-	5 ETHYL ALCOHOL
PEL	Long-term value: 1900 mg/m³, 1000 ppm
REL	Long-term value: 1900 mg/m³, 1000 ppm
TLV	Short-term value: 1000 ppm
	A3

(Contd. on page 5)

Trade name: YUZU FLAVOR EXTRACT

(Contd. of page 4)

- · Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

· Breathing equipment:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection:



Tightly sealed goggles

9 Physical and chemical properties

- · Information on basic physical and chemical properties
- · General Information
- · Appearance:

Form: Liquid

Color: According to product specification

Odor: CharacteristicOdor threshold: Not determined.

· pH-value: Not determined.

Change in condition

Melting point/Melting range:
Boiling point/Boiling range:
Undetermined.
Undetermined.

*Flash point:

30.6 °C (87.1 °F)

· Flammability (solid, gaseous): Not applicable.

(Contd. on page 6)

Trade name: YUZU FLAVOR EXTRACT

	(Contd. of page	
Decomposition temperature:	Not determined.	
Auto igniting:	Product is not selfigniting.	
Danger of explosion:	Product is not explosive. However, formation of explosive air/vapo mixtures are possible.	
Explosion limits:		
Lower:	2.6 Vol %	
Upper:	15 Vol %	
Vapor pressure at 20 °C (68 °F):	59 hPa (44.3 mm Hg)	
Density at 20 °C (68 °F):	0.99095 g/cm³ (8.26948 lbs/gal)	
Relative density	Not determined.	
Vapor density	Not determined.	
Evaporation rate	Not determined.	
Solubility in / Miscibility with		
Water:	Fully miscible.	
Partition coefficient (n-octanol/wate	er): Not determined.	
Viscosity:		
Dynamic:	Not determined.	
Kinematic:	Not determined.	
Solvent content:		
Organic solvents:	83.7 %	
Water:	12.3 %	
VOC content:	83.69 %	
	829.4 g/l / 6.92 lb/gal	
Solids content:	0.1 %	
Other information	No further relevant information available.	

10 Stability and reactivity

- · Reactivity No further relevant information available.
- · Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- · Incompatible materials: No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:
- · LD/LC50 values that are relevant for classification:

57-55-6 PROPYLENE GLYCOL

Dermal LD50 20,800 mg/kg (rabbit)

(Contd. on page 7)

Trade name: YUZU FLAVOR EXTRACT

(Contd. of page 6)

1

64-17-5 ETHYL ALCOHOL

Inhalative LC50/4 h 20,000 mg/l (rat)

- · Primary irritant effect:
- on the skin: No irritant effect.
- · on the eye: No irritating effect.
- · Sensitization: Sensitization possible through skin contact.
- · Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations: Irritant

· Carcinogenic categories

· IARC (International Agency for Research on Cancer)

64-17-5 ETHYL ALCOHOL

· NTP (National Toxicology Program)

None of the ingredients is listed.

OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- · Additional ecological information:
- · General notes:

Water hazard class 2 (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

- · Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- · vPvB: Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- · Uncleaned packagings:
- **Recommendation:** Disposal must be made according to official regulations.
- · Recommended cleansing agent: Water, if necessary with cleansing agents.

HS

Trade name: YUZU FLAVOR EXTRACT

(Contd. of page 7)

Transport information	
UN-Number	
DOT, IMDG, IATA	UN1197
UN proper shipping name	
DOT	Extracts, flavoring, liquid
IMDG, IATA	EXTRACTS, FLAVOURING, LIQUID
Transport hazard class(es)	
DOT	
FAMMARIE LOOD	
Class Label	3 Flammable liquids 3
IMDG, IATA	<u> </u>
Class Label	3 Flammable liquids 3
Packing group	
DOT, IMDG, IATA	III
Environmental hazards:	Not applicable.
Special precautions for user	Warning: Flammable liquids
Hazard identification number (Kemler code):	
EMS Number:	F-E,S-D
Stowage Category	A
Transport in bulk according to Annex II of	N
MARPOL73/78 and the IBC Code	Not applicable.
Transport/Additional information:	
DOT	
Quantity limitations	On passenger aircraft/rail: 60 L
	On cargo aircraft only: 220 L
IMDG	
Limited quantities (LQ)	5L
Excepted quantities (EQ)	Code: E1
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 1000 ml
UN "Model Regulation":	UN 1197 EXTRACTS, FLAVOURING, LIQUID, 3, III

Trade name: YUZU FLAVOR EXTRACT

(Contd. of page 8)

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- · Sara
- · Section 355 (extremely hazardous substances):

None of the ingredients is listed.

· Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

- TSCA (Toxic Substances Control Act): All substances are active or exempt.
- · Hazardous Air Pollutants

None of the ingredients is listed.

- · Proposition 65
- · Chemicals known to cause cancer:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

Chemicals known to cause developmental toxicity:

64-17-5 ETHYL ALCOHOL

- · Carcinogenic categories
- · EPA (Environmental Protection Agency)

None of the ingredients is listed.

· TLV (Threshold Limit Value)

64-17-5 ETHYL ALCOHOL

A3

· NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

- · GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
- · Hazard pictograms







GHS02

GHS07

· Signal word Danger

· Hazard-determining components of labeling:

ETHYL ALCOHOL

GRAPEFRUIT OIL

ORANGE OIL

LEMON OIL

Hazard statements

Flammable liquid and vapor.

May cause an allergic skin reaction.

May cause cancer.

· Precautionary statements

Obtain special instructions before use.

(Contd. on page 10)

Trade name: YUZU FLAVOR EXTRACT

(Contd. of page 9)

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

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Keep container tightly closed.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting/equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Avoid breathing dust/fume/gas/mist/vapors/spray

Contaminated work clothing must not be allowed out of the workplace.

Wear protective gloves/protective clothing/eye protection/face protection.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF exposed or concerned: Get medical advice/attention.

Specific treatment (see on this label).

If skin irritation or rash occurs: Get medical advice/attention.

Wash contaminated clothing before reuse.

In case of fire: Use CO2, powder or water spray to extinguish.

Store in a well-ventilated place. Keep cool.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

- · National regulations:
- · Information about limitation of use:

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- · Department issuing SDS: Regulatory Department
- · Abbreviations and acronyms:

IMDG: International Maritime Code for Dangerous Goods

 $DOT: \ US \ Department \ of \ Transportation$

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Flammable Liquids 2: Flammable liquids – Category 2

Flammable Liquids 3: Flammable liquids – Category 3

Acute Toxicity - Oral 4: Acute toxicity - Category 4

Skin Irrititation 2: Skin corrosion/irritation – Category 2

Sensitization - Skin 1: Skin sensitisation - Category 1

Carcinogenicity 1A: Carcinogenicity - Category 1A

(Contd. on page 11)

Trade name: YUZU FLAVOR EXTRACT

(Contd. of page 10)

Aspiration Hazard 1: Aspiration hazard – Category 1

* Data compared to the previous version altered.