

SAFETY DATA SHEET

01. IDENTIFICATION

NAME OF PREPARATION OR SUBSTANCE:
SUPPLIER NAME:
SUPPLIER ADDRESS:

TELEPHONE NUMBER:

Key Lime Oil – Cold Pressed
Jedwards International, Inc.
141 Campanelli Drive
Braintree, MA 02184 USA
(617)472-9300

02. HAZARD IDENTIFICATION



GHS07



GHS09



GHS08



GHS02

LEGAL WARNING:
PRODUCT IDENTIFIER:
EC 227-813-5:
EC 204-872-5:
EC 202-796-7:
EC 232-087-8:

Danger

(R)-P-MENTHA-1,8-DIENE
B-PINENE
P-CIMENE
ALPHA PINENE

HAZARDS AND ADDITIONAL INFORMATION ON THE DANGERS:

H226:
H304:
H315:
H317:
H319:
H410:

Flammable liquid and vapor
May be fatal if swallowed and enters airways
May cause skin irritation
May cause skin allergy
Causes severe eye irritation
Toxic to aquatic organisms. Causes adverse long-term effects.

CAUTION ADVICES. PREVENTION:

P210:

P261:

P273:
P280:

Keep away from heat, sparks, open flames and hot surfaces. Do not smoke.
Avoid breathing dust, gas, fumes, mists, vapors or aerosols.
Avoid release into the environment
Wear protective gloves, protective clothing and equipment for eye and face protection.

CAUTION ADVICES. INTERVENTION:

P301 + 310:

If swallowed, call a poison control center or doctor.



P303 + P361 + P353:

If contact with skin or hair, immediately remove contaminated clothing. Flush skin or hair with water and shower.

CAUTION ADVICES: ELIMINATION:
P501:

Eliminate content/recipient in a collection point for hazardous or special waste.

OTHER HAZARDS:

The product does not contain substances of very high concern (SVHC) published by the European Chemicals Agency (ECHA) under Article 57 of REACH. The product does not meet the criteria applicable to mixtures PBT or vPvB in accordance with Annex XIII of the REACH regulation EC 1907/2006.

03. COMPOSITION/INFORMATION ON INGREDIENTS

INCI NAME:	<i>Citrus aurantifolia</i>
CAS NUMBER:	8008-26-2
EC NUMBER:	290-010-3
FEMA:	2631
USE:	Perfumery, flavor and food grade application
PRODUCTION PROCESS:	Essential oil extracted by CP from the outer part of fresh lime peel

RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND AGAINST USES ADVISED: Aromatic raw material

IDENTIFICATION	CE 1272/2008	67/548/CEE	NOTE	%
CAS: 5989-27-5 EC: 277-813-5 (R)-P-MENTHA-1,8-DIENE	GHS02, GHS07, GHS09 Wng Flam.Liq. 3,H226 Skin Irrit. 2,H315 Skin Sens. 1,H317 Aquatic Acute 1,H400 M Acute = 1 Aquatic Chronic 1,H410 M Chronic = 1	Xi,N Xi; R38-R43 N; R50/53 R10	[1]	Between 46 and 55
CAS: 99-87-6-40-5 EC: 202-796-7 P-CIMENE	GHS08, GHS02, GHS07 Dgr Asp.Tox. 1,H304 Flam.Liq. 3,H226 Skin Irrit. 2, H315 Skin Sens. 1B, H317	Xi,N N; R51/53-65 R10		Between 0.8 and 1.2
CAS: 127-91-3 EC: 204-872-5 B-PINENE	GH308, GHS02, GHS07 Dgr Asp Tox. 1,H304 Flam Liq. 3,H226 Skin Irrit. 2,H315 Skin Sens, 1B, H317	Xn Xn; R65 Xi; R38-R43 R10		Between 15 and 22
CAS: 5392-40-5 EC: 226-394-6 CITRAL		Xi; R38 R43		Between 3 and 6
CAS: 99-85-4	GHS08, GHS02 Dgr	Xn		



EC: 232-087-8	Flam.Liq. 3,H226 Asp. Tox. 1,H304	Xn; R65		Between 2 and 3
ALPHA PINENE		R10		

INGREDIENTS INFORMATION:

[1]: Substance for which there are exposure limits in the workplace.

04. FIRST AID MEASURES

In a general way, in case of doubt or if symptoms persist, always call a doctor. NEVER give anything to an unconscious person.

EYE CONTACT:

Wash thoroughly with sweet, clean water for 15 minutes, holding the eyes open. In the event of pain, redness or visual impairment, consult an ophthalmologist.

SKIN CONTACT:

Remove affected clothing and wash all exposed skin areas with mild soap and water, followed by water rinse. In case of an allergic reaction, seek medical attention. If the contaminated area is wide spread and/or skin damage appears, it is necessary to consult a doctor or to transfer to a hospital. Do nothing by mouth. If swallowed, if quantity is small (no more than one mouthful), rinse the mouth with water and consult a doctor. ALWAYS SHOW THE LABEL. In case of accidental ingestion, do not drink, do not induce vomiting and immediately transfer to a hospital by ambulance.

INGESTION:

**PAIN SYMPTOMS AND EFFECTS, ACUTE AND DELAYED:
INDICATION OF IMMEDIATE AND NECESSARY MEDICAL CARE/SPECIAL TREATMENT:**

No data available

No data available

05. FIRE FIGHTING MEASURES

This product is flammable. Dry chemical, carbon dioxide and other extinguishing gas are suitable for small fires.

EXTINGUISHING WAY:

Refresh containers near the flames to avoid the risk of bursting under pressure.

**APPROPRIATE EXTINGUISHING MEDIA:
UNSUITABLE EXTINGUISHING MEDIA:
SPECIAL HAZARDS RESULTING FROM THE SUBSTANCE:**

Powders, carbon dioxide (CO₂), foam
Water

A fire will often product a thick black smoke. Exposure to decomposition products may be hazardous to health. Do not breathe fumes.



In case of fire, it can produce carbon monoxide (CO) and carbon dioxide (CO₂). Stakeholders will be equipped with protective equipment and emergency procedures.

ADVICE FOR FIRE FIGHTERS:

06. ACCIDENTAL RELEASE MEASURES

INDIVIDUAL PROTECTIVE EQUIPMENT
PRECAUTIONS AND EMERGENCY PROCEDURES:
FOR NON-RESCUER:
FOR RESCUER:

Refer to protective measures in section 7 & 8
Avoid contact with skin and eyes
The personnel will be equipped with appropriate personal protective equipment (see Section 8)

PRECAUTION FOR THE PROTECTION
OF THE ENVIRONMENT:

Contain and collect spillage with non-combustible absorbent materials. Example: sand, earth, vermiculite, diatomaceous earth, in drums for waste disposal. Prevent any material from entering sewers or waterways. If the product contaminates waterways, rivers or drains, alert the relevant authorities in accordance with statutory procedures. Place drums for the eradication recovers waste according to regulations in force (see Section 13).

METHODS AND MATERIALS FOR
CONTAINMENT AND CLEANING:

Clean preferably with a detergent to avoid the use of solvents.

07. HANDLING & STORAGE

Requirement relating to storage premises apply to workshop where the product is handled. People who have a history of skin sensitization must not handle such products.

PRECAUTIONS TO BE TAKEN FOR SAFE HANDLING: Wash hands after each use. Remove and wash contaminated clothing before reuse. Remove contaminated clothing and protective equipment before entering eating areas.

FIRE PREVENTION:

Handle in well ventilated areas. Prevent the creation of flammable or explosive concentrations in air and avoid steam concentrations the upper limit values for occupational exposure. Avoid the accumulation of electrostatic charges with connections to earth. The product may charge electrostatically: always use earthing leads when pouring. Wear antistatic shoes



JEDWARDS INTERNATIONAL, INC.

and clothes, and make floors of conductive material. Use the product in areas from which all naked lights and other sources of ignition, and possess protected electrical equipment. Keep packages tightly closed and away from sources of heat, sparks and open flame. Do not use tools which make produce sparks. DO NOT SMOKE. Interdict the access by unauthorized persons.

RECOMMENDED EQUIPMENT AND PROCEDURES:

For personal protection, see Section 8. Observe precautions as specified on the label and rules of labor protection. Avoid contact with skin and eyes.

EQUIPMENT AND PROCEDURES PROHIBITED:

Do not smoke, eat or drink in places where the product is used. Never open the drums with pression.

NECESSARY CONDITIONS TO ENSURE THE SAFETY OF THE STORAGE CONDITIONS, TAKING INTO ACCOUNT EVENTUAL INCOMPATIBILITIES: STORAGE:

No data available. Keep container tightly closed in a dry, well ventilated place. Keep away from food, drink and animal feeding stuffs. Keep away from sources of ignition. Do not smoke. Keep away from sources of ignition, heat and direct solar light. Avoid the accumulation of electrostatic charge.

PACKING:

Always keep in containers of same material as the original one.

08. EXPOSURE CONTROLS/PERSONAL PROTECTION

CONTROL PARAMETERS:

OCCUPATIONAL EXPOSURE LIMITS:

SWITZERLAND (SUVA 2009):

CAS:	VME-mg/m3:	VME-ppm:	VLE-mg/m3:	VLE-ppm:	Temps:	RSB:
5989-27-5	110	20	220	40	4X15	S

EXPOSITION CONTROL:

INDIVIDUAL PROTECTION MEASURES SUCH AS PERSONAL PROTECTIVE EQUIPMENT:

Use properly maintained equipment and clean personal protective equipment. Store personal protective equipment in a clean place, away from the work area. When using, do not eat, drink or smoke. Remove and wash contaminated clothing before reuse. Ensure adequate ventilation, especially in confined areas.



EYE AND FACE PROTECTION:

Avoid contact with eyes. Use eye protectors designed to protect against liquid splashes. Before handling, it is necessary to wear glasses with lateral protection conforming to standard EN166. In case of increased danger, use a facial screen for face protection. Wearing prescription glasses is not a protection. It is recommended that contact lens wearers use corrective glasses during work where they can be exposed to irritating steam. Provide eye washes in workshops where the product is handled consistently.

HAND PROTECTION:

Use appropriate protective gloves resistant to chemicals in accordance with standard EN374. The selection of gloves must be made according to the application and duration of use in the workplace. Recommended: Impervious gloves complying with the standard EN374.

BODY PROTECTION:

Avoid contact with skin. Wear appropriate protective clothing. Type of appropriate protective clothing. In case of heavy projections, wear clothes with a tight chemical protective liquid (type3) according to EN14605 to avoid contact with skin. If risk of splashing, wear chemical protective clothing (type6) according to the NF EN13034 to avoid contact with skin. Staff will wear a regularly washed work garment. After contact with the product, all parts of the body should be washed.

09. PHYSICAL & CHEMICAL PROPERTIES

PHYSICAL STATE:

Liquid fluid

COLOR:

Green to yellow

ODOR:

Characteristic, fresh lime peel

FINAL BOILING POINT (°C):

148

REFRACTION INDEX (20°C):

1.4760-1.4860

OPTICAL ROTATION:

+38° + 53°

RELATIVE DENSITY (20°C):

0.8570-0.8790

FLASH POINT (°C):

48

10. STABILITY & REACTIVITY

REACTIVITY:

No data available



CHEMICAL STABILITY:

This product is stable with the handling and storage recommended in Section 7.

POSSIBILITY OF HAZARDOUS REACTIONS:
CONDITIONS TO AVOID:

No data available.

Any device capable of producing a flame or high temperature should not be allowed on the premises. Avoid static discharges, overheating, heat, flame and hot surfaces, sparks.

INCOMPATIBLE MATERIALS:
HAZARDOUS DECOMPOSITION PRODUCTS:

Oxidizing agents, halogen compounds.

Thermal decomposition may release/form carbon monoxide (CO) and carbon dioxide (CO₂).

11. TOXICOLOGICAL INFORMATION

TOXICOLOGICAL EFFECT INFORMATION:

May cause reversible skin lesions such as inflammation of the skin, the formation of erythema eschar or edema following exposure of up to four hours. May cause reversible eye effects such as eye irritation, which is totally reversible in an observation period of 21 days. May cause allergic reaction by skin contact. Aspiration toxicity can cause severe acute effects such as chemical pneumonia, greater or lesser pulmonary harm, or death following aspiration.

SUBSTANCES:

SERIOUS DAMAGE/IRRITATION TO EYES:

LINALOL (CAS: 78-70-6) May cause serious eye irritation. Corneal opacity: $1 \leq \text{score} < 2$ completely reversible effects of 21 days of observation.

MIXTURE:

ASPIRATION HAZARD:

Can be fatal if it enters airways. Aspiration toxicity can cause severe acute effects such as chemical pneumonia, varying degrees of pulmonary injury or death following aspiration.

ICRC MONOGRAPH (INTERNATIONAL CENTRE FOR RESEARCH ON CANCER):

CAS 5989-27-5: ICRC3: the agent is not classifiable as to carcinogenicity to humans.

SUBSTANCE DESCRIBED IN MSDS INRS (NATIONAL INSTITUTE OF RESEARCH AND SECURITY):

-d-limonene (CAS 5989-27-5): see safety data sheet No. 227 of 2004.



12. ECOLOGICAL INFORMATION

Very toxic to aquatic organisms: causes long-term effects. Any seepage into sewers or waterways should be avoided.

TOXICITY:

MIXTURES:	No data available
PERSISTANCE AND DEGRADABILITY:	No data available
POTENTIAL BIOACCUMULATION:	No data available
MOBILITY IN SOIL:	No data available
RESULTANTS EVALUATION OF PBT & vPvB:	No data available
OTHER ADVERSE EFFECTS:	No data available

13. DISPOSAL CONSIDERATIONS

Appropriate management of waste product and/or its container must be determined in accordance with the provisions of Directive 2008/98/EC.

METHODS OF WASTE TREATMENT:

Do not discharge into drains or in water courses.

WASTE:

Waste management is done without endangering human health and without harming the environment, including creating risk to water, air, soil, fauna or flora. Recycle or dispose of in accordance with the legislations in force preferably by a collector or an approved company. Do not contaminate the ground or water with waste. Do not proceed with disposal in the environment.

SOILED PACKAGING:

Completely empty the container. Keep the label on the container. Recycle or dispose of in accordance with federal, state and local environmental control regulations.

14. TRANSPORT INFORMATION

Transport the product in accordance with the provisions of the ADR for road, RID for rail, the IMDG for sea and ICAO/IATA for air transport (ADR 2013 – IMDG 2012 – ICAO/IATA 2013).

UN NUMBER:	1169
UN EXPEDITION NUMBER:	UN1169=Liquid Aromatic Extract
UN SHIPPING NAME:	



JEDWARDS
INTERNATIONAL, INC.



CLASSIFICATION: 3
PACKING GROUP: III
HAZARDOUS ENVIRONMENT:
ENVIRONMENTALLY HAZARDOUS MATERIAL:



PARTICULAR PRECAUTION TO
BE TAKEN BY THE USER:

LAND TRANSPORT:

ADR CLASS:
ADR PACKING GROUP:
DOT (USA):
GROUP:
CLASS:
EMERGENCY ACTION IN CASE
OF ACCIDENT:

3
III 9E
Special provision: 640E
III
3

No naked lights. No smoking. Keep public
away from danger area.

SEA TRANSPORT:

IMO-IMDG CODE:
IMO PACKING GROUP:
EMS-Nr:
IMDG-MARINE POLLUTION:

Class 3
III
F*E S*D
YES

AIR TRANSPORT:

PROPER SHIPPING NAME:
ICAO/IATA:

Extracts, Aromatic, Liquid
Packaging instructions cargo: 310
Packaging instructions passenger: 309

IATA - CLASS OF DIVISION:
IATA PACKING GROUP:
PERSONAL PRECAUTIONS:

3
III
The driver shall not attempt to deal with any
fire of the load.

IN CASE OF SPILLAGE/LEAKAGE:

Clean up even minor leaks or spills if
possible without unnecessary risk.

EMERGENCY ACTION IN CASE
OF ACCIDENT:

Mark roads and warn other road users.

ADDITIONAL INFORMATION:

None

15. REGULATORY INFORMATION

Regulatory/legislation specific for the substance or mixture safety health and environment.

INFORMATION ON THE CLASSIFICATION AND LABELING IN SECTION 2:

The following regulations have been taken into account: Directive 67/548/EEC and its adaptations. Directive 1999/45/EEC and its adaptations. Regulation (EC) No 1272/2008 amended by Regulation (EU) No 618/2012. Regulation (EC) No 1272/2008 amended by Regulation (EU) No 758/2013.

PACKING INFORMATION: PARTICULAR PROVISIONS:

No data available
No data available

EUROPEAN COMMUNITY:

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006. Directive 2006/121/EC of the European Parliament and of the Council of 18 December 2006.

EC CLASSIFICATION:

R10
Xn; R65
Xi; R38
R43
N; R50/53



SYMBOLS:

R PHRASES:

Xn:
N:
R10:
R38:
R43:
R50/53:

Harmful
Dangerous for the environment
Flammable
Irritating to skin
May cause sensitization by skin contact
Very toxic to aquatic organisms. May cause long term adverse effects in the aquatic environment.
Harmful: may cause lung damage if swallowed

R65:

S PHRASES:

S24:
S37:

Avoid contact with skin.
Wear suitable gloves.

- S61: Avoid release into the environment. Refer to special instructions/Safety data sheets.
- S60: Eliminate the product and its container as hazardous waste.
- S62: If swallowed, do not induce vomiting. Seek medical advice immediately and show this container or label.
- S57: Use an appropriate container to avoid and environmental contamination

CONTAINS:

SUBSTANCE NAME/EC CODE	CONTENTS:
EC 277-813-5: (R)-p-mentha-1,8-diene:	Between 46 and 55%
EC 232-087-8: Alpha Pinene:	Between 2 and 3%
EC 202-796-7: p-cimene:	Between 0.8 and 1.2%
EC 204-872-5: B-Pinene:	Between 15 and 22%
EC 226-394-6: Citral:	Between 3 and 6%

GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELING OF CHEMICALS (GHS)

Regulation (EC) No 1272/2008 of the European Parliament and of the council of 16 December 2008 on classification, labeling and packaging of substance and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

HAZARD CLASS AND CATEGORY CODE:

PHYSICAL HAZARDS:	Flammable liquids * Category 3 * Warning (CLP: Flam. Liq. 3)
HEALTH HAZARDS:	Skin sensitization * Category 1 * Warning (CLP: Skin Sens. 1) Aspiration hazard * Category 1 * Danger (CLP: Asp. Tox. 1)

LABELING:

HAZARD PICTOGRAMS:



SIGNAL WORDS:

HAZARD STATEMENTS:

Danger. Flammable liquid and vapor. May be fatal if swallowed and enters airways. May cause an allergic skin reaction.

PRECAUTIONARY STATEMENTS:

PREVENTION:

Wear protective gloves, protective clothing, eye protection, face protection. Keep away from heat, sparks, open flames or hot surfaces. No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion proof electrical,



RESPONSE:

IF ON SKIN (OR HAIR):

IF SWALLOWED:

IF SKIN IRRITATION/RASH OCCURS:

USE FOR EXTINCTION:

STORAGE:

DISPOSAL CONSIDERATIONS:

ventilation, lighting, L equipment. Avoid breathing dust, fumes, gas, mist, vapors, spray. Contaminated work clothing should not be allowed out of the workplace.

Remove all contaminated clothing immediately. Rinse skin with water/shower. Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor. Specific treatment.

Get medical advice. Wash contaminated clothing before reuse.

All extinguishing media can be used.

Keep cool. Store locked up.

Dispose of this material and its container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

16. OTHER INFORMATION

RECOMMENDED USES AND RESTRICTIONS:

Specifications and technical information on the product may be obtained by your dealer.

LIST OF RELEVANT R, H PHRASES
(HEADING SECTION 3):

H226:	Flammable liquid and steam
H304:	May cause death
H315:	May cause skin irritation
H317:	May cause skin allergy
H319:	Causes severe eye irritation
H400:	Toxic to aquatic organisms
H410:	Toxic to aquatic organisms. Causes long-term adverse effects
R10:	Flammable
R38:	Irritating to skin
R43:	May cause sensitization by skin contact
R50/53:	Very toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.
R65:	Harmful: may cause lung damage if swallowed

LIST OF RELEVANT SYMBOLS (HEADING 3):

N:	Dangerous for the environment
Xi:	Irritant
Xn:	Harmful

ABBREVIATIONS:



ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
IMDG: International Maritime Dangerous Goods
IATA: International Air Transport Association
OACI: Organization of the International Civil Aviation
RID: Regulations concerning the International Carriage of Dangerous Goods by Rail
WGK: Wassergefahrdungskategorie (Water Hazard Class)
GHS02: Flammable
GHS07: Exclamation mark
GHS08: Health hazard
GHS09: Environment

The contents and format of this SDS are in accordance with REGULATION (EC) No 1907/2006 of the European Parliament and of the Council.

Essential oils must be diluted prior to use. It is the sole responsibility of the user to determine the method and amount of dilution required for safe use, which may vary depending on the nature of the intended use. Keep away from children and pregnant women.

The information provided above is intended only as a guide to the appropriate precautionary handling of the material by properly trained personnel using this product. It is the responsibility of the customer and user to ensure it has in place provisions for the safe and proper handling of the material. Although Jedwards International, Inc. believes the above information to be accurate based on the information available to Jedwards, it is the responsibility of the customer and user of the material to perform its own investigation and due diligence prior to use to verify that the product purchased from Jedwards meets their quality requirements and is appropriate for the use to which the product is to be put. Use and purchase of this material is subject to Jedwards International, Inc. standard terms and conditions, which supersede any conflicting terms contained on Buyer's purchase order or any document or instrument supplied by Buyer.