



OIL, BLUEBERRY*

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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Version: 1.1

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : OIL, BLUEBERRY*
CAS-No. : N/A
Product code : 90-3045-42

1.2. Recommended use and restrictions on use

1.3. Supplier

The Lebermuth Company
4004 Technology Drive
South Bend, IN 46628 - United States
T 574-259-7000 - F 574-258-7450
info@lebermuth.com - www.lebermuth.com

1.4. Emergency telephone number

Emergency number : CHEMTREC - USA: 800-424-9300 International: +1 703-527-3887 / 1-800-424-9300
CCN 13010

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Flammable liquids, Category 4	Combustible liquid
Serious eye damage/eye irritation, Category 2	Causes serious eye irritation.
Skin sensitisation, Category 1	May cause an allergic skin reaction.

2.2. GHS Label elements, including precautionary statements

GHS US labelling

Hazard pictograms (GHS US) :



GHS07

Signal word (GHS US) :

Warning

Hazard statements (GHS US) :

Combustible liquid
May cause an allergic skin reaction.
Causes serious eye irritation.

Precautionary statements (GHS US) :

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Avoid breathing dust/fume/gas/mist/vapours/spray.
Wash hands, forearms and face thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves/protective clothing/eye protection/face protection.
If on skin: Wash with plenty of water.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Specific treatment (see supplemental first aid instruction on this label).
If skin irritation or rash occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
Wash contaminated clothing before reuse.
In case of fire: Use media other than water to extinguish.
Store in a well-ventilated place. Keep cool.
Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

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2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
omega-Pentadecalactone	(CAS-No.) 106-02-5	5 – 10	Skin Sens. 1B, H317
ETHYL BUTYRATE	(CAS-No.) 105-54-4	1 – 5	Flam. Liq. 3, H226 Eye Irrit. 2A, H319
ETHYL ISOVALERATE	(CAS-No.) 108-64-5	1 – 5	Flam. Liq. 3, H226 Skin Irrit. 2, H315
LINALOOL	(CAS-No.) 78-70-6	1 – 5	Flam. Liq. 4, H227 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Skin Sens. 1B, H317
ETHYL LACTATE	(CAS-No.) 97-64-3	1 – 5	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335
METHYL 2-OCTYNOATE	(CAS-No.) 111-12-6	0.1 – 1	Flam. Liq. 4, H227 Skin Sens. 1A, H317

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

- First-aid measures general : If you feel unwell, seek medical advice.
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
- First-aid measures after skin contact : Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
- First-aid measures after eye contact : 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.
- First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

- Symptoms/effects after inhalation : Although no appropriate human or animal health effects data are known to exist, this material is expected to be an inhalation hazard.
- Symptoms/effects after skin contact : May cause an allergic skin reaction.
- Symptoms/effects after eye contact : Eye irritation.
- Symptoms/effects after ingestion : None under normal conditions.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.
- Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

- Fire hazard : Combustible liquid.
- Explosion hazard : No direct explosion hazard.
- Reactivity : The product is non-reactive under normal conditions of use, storage and transport.

5.3. Special protective equipment and precautions for fire-fighters

- Firefighting instructions : Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
- Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material damage.

6.1.1. For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.
Emergency procedures : Ventilate spillage area. No open flames, no sparks, and no smoking. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak without risks if possible.
Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.
Precautions for safe handling : Ensure good ventilation of the work station. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Wear personal protective equipment. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray.
Hygiene measures : Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Keep in a cool, well-ventilated place away from heat.
Storage conditions : Store in a well-ventilated place. Keep cool.
Packaging materials : Store always product in container of same material as original container.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.
Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Wear recommended personal protective equipment.

Hand protection:

Protective gloves

Eye protection:

Safety glasses

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Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: COLORLESS TO YELLOW
Odour	: CHARACTERISTIC, MATCHING RETAINER SAMPLE
Odour threshold	: No data available
pH	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: 62 °C
Relative evaporation rate (butylacetate=1)	: No data available
Flammability	: Not applicable.
Vapour pressure	: No data available
Relative vapour density at 20°C	: No data available
Relative density	: 0.921 (0.911 – 0.931)
Solubility	: Insoluble.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive limits	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available

9.2. Other information

Refractive index	: 1.443 (1.433 – 1.453)
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SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

No additional information available

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10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

omega-Pentadecalactone (106-02-5)	
LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: EU Method B.1 tris (Acute Oral Toxicity - Acute Toxic Class Method), Guideline: OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method)
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: EU Method B.3 (Acute Toxicity (Dermal)), Guideline: OECD Guideline 402 (Acute Dermal Toxicity)

ETHYL BUTYRATE (105-54-4)	
LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method), Remarks on results: other:
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Remarks on results: other:
LC50 Inhalation - Rat [ppm]	> 4000 ppm Animal: rat, Guideline: other:, Remarks on results: other:

ETHYL LACTATE (97-64-3)	
ATE US (oral)	2500 mg/kg bodyweight

LINALOOL (78-70-6)	
ATE US (oral)	2790 mg/kg bodyweight

Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Causes serious eye irritation.
Respiratory or skin sensitisation : May cause an allergic skin reaction.
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

ETHYL LACTATE (97-64-3)	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure : Not classified

omega-Pentadecalactone (106-02-5)	
NOAEL (oral, rat, 90 days)	≥ 1000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)

Aspiration hazard : Not classified
Viscosity, kinematic : No data available
Symptoms/effects after inhalation : Although no appropriate human or animal health effects data are known to exist, this material is expected to be an inhalation hazard.
Symptoms/effects after skin contact : May cause an allergic skin reaction.
Symptoms/effects after eye contact : Eye irritation.
Symptoms/effects after ingestion : None under normal conditions.

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SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

omega-Pentadecalactone (106-02-5)	
LC50 - Fish [1]	> 0.797 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 - Crustacea [1]	> 0.17 mg/l Test organisms (species): Daphnia magna
LC50 - Fish [2]	2 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
LOEC (chronic)	0.127 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	0.068 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC chronic fish	0.027 mg/l Test organisms (species): Pimephales promelas Duration: '33 d'

ETHYL BUTYRATE (105-54-4)	
LC50 - Fish [1]	≥ 100 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
EC50 - Crustacea [1]	116.6 mg/l Test organisms (species): Daphnia magna
NOEC (chronic)	28833 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC chronic fish	1483 mg/l Test organisms (species): other: Duration: '28 d'

ETHYL ISOVALERATE (108-64-5)	
LC50 - Fish [1]	8.45 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Danio rerio, Semi-static system, Fresh water, Experimental value, GLP)
ErC50 algae	124 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Nominal concentration)

12.2. Persistence and degradability

ETHYL ISOVALERATE (108-64-5)	
Persistence and degradability	Readily biodegradable in water.
ThOD	2.34 g O ₂ /g substance

12.3. Bioaccumulative potential

ETHYL ISOVALERATE (108-64-5)	
Partition coefficient n-octanol/water (Log Pow)	2.47 (Practical experience/observation, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 23.8 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

12.4. Mobility in soil

ETHYL ISOVALERATE (108-64-5)	
Ecology - soil	Low potential for adsorption in soil.

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Regional waste regulation : Disposal must be done according to official regulations.
Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations : Disposal must be done according to official regulations.
Product/Packaging disposal recommendations : Disposal must be done according to official regulations.
Additional information : Do not re-use empty containers.

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SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description (DOT)	: UN1266 Perfumery products (Regulated for Bulk Only), Comb Liq, III
UN-No. (DOT)	: UN1266
Proper Shipping Name (DOT)	: Perfumery products Regulated for Bulk Only
Class (DOT)	: Comb Liq - Combustible liquid
Packing group (DOT)	: III - Minor Danger
DOT Packaging Non Bulk (49 CFR 173.xxx)	: 203
DOT Packaging Bulk (49 CFR 173.xxx)	: 242
DOT Special Provisions (49 CFR 172.102)	: B1 - If the material has a flash point at or above 38 C (100 F) and below 93 C (200 F), then the bulk packaging requirements of 173.241 of this subchapter are applicable. If the material has a flash point of less than 38 C (100 F), then the bulk packaging requirements of 173.242 of this subchapter are applicable. IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672). T2 - 1.5 178.274(d)(2) Normal..... 178.275(d)(3) TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / (1 + a (tr - tf))$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.
DOT Packaging Exceptions (49 CFR 173.xxx)	: 150
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 60 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 220 L
DOT Vessel Stowage Location	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.
Emergency Response Guide (ERG) Number	: 127
Other information	: No supplementary information available.

Transportation of Dangerous Goods

Not regulated

"

Transport by sea

Not regulated

Air transport

Not regulated

SECTION 15: Regulatory information

15.1. US Federal regulations

METHYL 2-OCTYNOATE (111-12-6)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

ETHYL ISOVALERATE (108-64-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

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ETHYL LACTATE (97-64-3)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

omega-Pentadecalactone (106-02-5)

Listed on the Canadian DSL (Domestic Substances List)

METHYL 2-OCTYNOATE (111-12-6)

Listed on the Canadian DSL (Domestic Substances List)

ETHYL BUTYRATE (105-54-4)

Listed on the Canadian DSL (Domestic Substances List)

ETHYL ISOVALERATE (108-64-5)

Listed on the Canadian DSL (Domestic Substances List)

ETHYL LACTATE (97-64-3)

Listed on the Canadian DSL (Domestic Substances List)

LINALOOL (78-70-6)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

omega-Pentadecalactone (106-02-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active
Listed on INSQ (Mexican National Inventory of Chemical Substances)


ETHYL BUTYRATE (105-54-4)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active
Listed on INSQ (Mexican National Inventory of Chemical Substances)

LINALOOL (78-70-6)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active
Listed on INSQ (Mexican National Inventory of Chemical Substances)

15.3. US State regulations

 **WARNING:** Prop 65 available upon request.

Component	State or local regulations
ETHYL BUTYRATE(105-54-4)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List
ETHYL LACTATE(97-64-3)	U.S. - New Jersey - Right to Know Hazardous Substance List

SECTION 16: Other information

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Full text of H-statements:

H226	Flammable liquid and vapour.
H227	Combustible liquid
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

SDS US (GHS HazCom 2012) - Lebermuth

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.