



OIL, APPLE FRESH GREEN PF*

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, APPLE FRESH GREEN PF*
CAS-No. : N/A
Product code : 90-3044-06

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 sensitization, Category 1 : May cause an allergic skin reaction

2.2. GHS Label elements, including precautionary statements

GHS US labeling

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/vapors/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 |
|--|----------------------|---------|---|
| Diethyl Malonate | (CAS-No.) 105-53-3 | 10 – 25 | Eye Irrit. 2A, H319 |
| ETHYL BUTYRATE | (CAS-No.) 105-54-4 | 1 – 5 | Flam. Liq. 3, H226 Eye Irrit. 2A, H319 |
| AMYL ALCOHOL | (CAS-No.) 71-41-0 | 1 – 5 | Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Inhalation:vapour), H332 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 |
| 2,4-Dimethyl-3-cyclohexen-1-carboxaldehyde | (CAS-No.) 68039-49-6 | 1 – 5 | Flam. Liq. 4, H227 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Skin Sens. 1B, 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 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/doctor/physician if you feel unwell.

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

- Symptoms/effects after skin contact : May cause an allergic skin reaction.
- Symptoms/effects after eye contact : Eye irritation.

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.

5.2. Specific hazards arising from the chemical

- Fire hazard : Combustible liquid.
- Reactivity : The product is non-reactive under normal conditions of use, storage and transport.

5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

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/vapors/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".

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6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

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

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/vapors/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

Storage conditions : Store in a well-ventilated place. Keep cool.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

| |
|---|
| OIL, APPLE FRESH GREEN PF* (N/A) |
|---|

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|-------------------------------------|
| No additional information available |
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|------------------------------------|
| Diethyl Malonate (105-53-3) |
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| No additional information available |
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| ETHYL BUTYRATE (105-54-4) |
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| No additional information available |
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|-------------------------------|
| AMYL ALCOHOL (71-41-0) |
|-------------------------------|

| |
|-------------------------------------|
| No additional information available |
|-------------------------------------|

| |
|--|
| 2,4-Dimethyl-3-cyclohexen-1-carboxaldehyde (68039-49-6) |
|--|

| |
|-------------------------------------|
| No additional information available |
|-------------------------------------|

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

Hand protection:

Protective gloves

Eye protection:

Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|---|--|
| Physical state | : Liquid |
| Color | : COLORLESS TO YELLOW |
| Odor | : CHARACTERISTIC, MATCHING RETAINER SAMPLE |
| Odor threshold | : No data available |
| pH | : No data available |
| Melting point | : Not applicable |
| Freezing point | : No data available |
| Boiling point | : No data available |
| Flash point | : 66 °C |
| Relative evaporation rate (butyl acetate=1) | : No data available |
| Flammability (solid, gas) | : Not applicable. |
| Vapor pressure | : No data available |
| Relative vapor density at 20°C | : No data available |
| Relative density | : 0.941 (0.931 – 0.951) |
| 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 |
| Explosion limits | : No data available |
| Explosive properties | : No data available |
| Oxidizing properties | : No data available |

9.2. Other information

Refractive index : 1.445 (1.435 – 1.455)

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

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 |

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Acute toxicity (inhalation) : Not classified

| ETHYL BUTYRATE (105-54-4) | |
|----------------------------------|--|
| LD50 oral rat | > 2000 mg/kg body weight 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 body weight 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: |

| AMYL ALCOHOL (71-41-0) | |
|-------------------------------|------------------------|
| ATE US (oral) | 3645 mg/kg body weight |
| ATE US (dermal) | 2290 mg/kg body weight |
| ATE US (gases) | 4500 ppmV/4h |
| ATE US (vapors) | 11 mg/l/4h |
| ATE US (dust, mist) | 1.5 mg/l/4h |

| 2,4-Dimethyl-3-cyclohexen-1-carboxaldehyde (68039-49-6) | |
|--|--|
| LD50 oral rat | 3900 mg/kg body weight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), 95% CL: 2900 - 5100 |
| LD50 dermal rabbit | > 5000 mg/kg body weight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity) |
| ATE US (oral) | 3900 mg/kg body weight |

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

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

| AMYL ALCOHOL (71-41-0) | |
|-------------------------------|-----------------------------------|
| STOT-single exposure | May cause respiratory irritation. |

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified
Viscosity, kinematic : No data available
Symptoms/effects after skin contact : May cause an allergic skin reaction.
Symptoms/effects after eye contact : Eye irritation.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

| 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' |

| 2,4-Dimethyl-3-cyclohexen-1-carboxaldehyde (68039-49-6) | |
|--|--|
| LC50 - Fish [1] | 15 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Oryzias latipes, Semi-static system, Fresh water, Experimental value, GLP) |
| EC50 - Crustacea [1] | 7.74 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Semi-static system, Fresh water, Experimental value, GLP) |

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2,4-Dimethyl-3-cyclohexen-1-carboxaldehyde (68039-49-6)

| | |
|-------------|--|
| ErC50 algae | 22.8 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP) |
|-------------|--|

12.2. Persistence and degradability

2,4-Dimethyl-3-cyclohexen-1-carboxaldehyde (68039-49-6)

| | |
|-------------------------------|-------------------------------------|
| Persistence and degradability | Not readily biodegradable in water. |
|-------------------------------|-------------------------------------|

12.3. Bioaccumulative potential

2,4-Dimethyl-3-cyclohexen-1-carboxaldehyde (68039-49-6)

| | |
|---|--|
| BCF - Other aquatic organisms [1] | 86.1 l/kg (Calculated value) |
| Partition coefficient n-octanol/water (Log Pow) | 3.1 (Experimental value, Equivalent or similar to OECD 117, 25 °C) |
| Bioaccumulative potential | Low potential for bioaccumulation (Log Kow < 4). |

12.4. Mobility in soil

2,4-Dimethyl-3-cyclohexen-1-carboxaldehyde (68039-49-6)

| | |
|--|---|
| Organic Carbon Normalized Adsorption Coefficient (Log Koc) | 2.2 (log Koc, OECD 121: Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography (HPLC), Experimental value, GLP) |
| 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

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

| | |
|---|--|
| Transport document description (DOT) | : NA1993 Combustible liquid, n.o.s. (2-tert-Butylcyclohexyl acetate, 3-methyl-2-butenyl acetate) - Regulated for Bulk only, Comb Liq, III |
| UN-No.(DOT) | : NA1993 |
| Proper Shipping Name (DOT) | : Combustible liquid, n.o.s. (2-tert-Butylcyclohexyl acetate, 3-methyl-2-butenyl acetate) - 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) | : 241 |
| DOT Symbols | : D - Proper shipping name for domestic use only, or to and from Canada, G - Identifies PSN requiring a technical name |
| DOT Special Provisions (49 CFR 172.102) | : 148 - For domestic transportation, this entry directs to § 173.66 for: a. The standards for transporting a single bulk hazardous material for blasting by cargo tank motor vehicles (CTMV); and b. The standards for CTMVs capable of transporting multiple hazardous materials for blasting in bulk and non-bulk packagings (i.e, a multipurpose bulk truck (MBT)). 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). T1 - 1.5 178.274(d)(2) Normal..... 178.275(d)(2) 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 |

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DOT Quantity Limitations Passenger aircraft/rail : 60 L
(49 CFR 173.27)

DOT Quantity Limitations Cargo aircraft only (49 : 220 L
CFR 175.75)

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

Other information : No supplementary information available.

Transportation of Dangerous Goods

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

Diethyl Malonate (105-53-3)

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

ETHYL BUTYRATE (105-54-4)

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

AMYL ALCOHOL (71-41-0)

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

15.2. International regulations

CANADA

Diethyl Malonate (105-53-3)

Listed on the Canadian DSL (Domestic Substances List)

ETHYL BUTYRATE (105-54-4)

Listed on the Canadian DSL (Domestic Substances List)

AMYL ALCOHOL (71-41-0)

Listed on the Canadian DSL (Domestic Substances List)

2,4-Dimethyl-3-cyclohexen-1-carboxaldehyde (68039-49-6)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

2,4-Dimethyl-3-cyclohexen-1-carboxaldehyde (68039-49-6)

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

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

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| Component | State or local regulations |
|----------------------------|--|
| Diethyl Malonate(105-53-3) | U.S. - New Jersey - Right to Know Hazardous Substance List |
| ETHYL BUTYRATE(105-54-4) | U.S. - New Jersey - Right to Know Hazardous Substance List |
| AMYL ALCOHOL(71-41-0) | U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List |

SECTION 16: Other information

Revision date : 08/16/2023

Full text of H-phrases:

| | |
|------|-------------------------------------|
| H226 | Flammable liquid and vapor |
| H227 | Combustible liquid |
| H315 | Causes skin irritation |
| H317 | May cause an allergic skin reaction |
| H318 | Causes serious eye damage |
| H319 | Causes serious eye irritation |
| H332 | Harmful if inhaled |
| 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.