

Safety Data Sheet

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

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product code :

1.2. Recommended use and restrictions on use

Recommended use : Fragrance compound

1.3. Supplier

1.4. Emergency telephone number

Emergency number

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Flammable liquids Category 4	H227 Combustible liquid
Skin corrosion/irritation Category 2	H315 Causes skin irritation
Serious eye damage/eye irritation Category 2A	H319 Causes serious eye irritation
Skin sensitization, Category 1	H317 May cause an allergic skin reaction
Hazardous to the aquatic environment - Acute Hazard Category 2	H401 Toxic to aquatic life
Hazardous to the aquatic environment - Chronic Hazard Category 3	H412 Harmful to aquatic life with long lasting effects

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) :

Warning

Hazard statements (GHS US) :

H227 - Combustible liquid
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation
H401 - Toxic to aquatic life
H412 - Harmful to aquatic life with long lasting effects

Precautionary statements (GHS US) :

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray
P264 - Wash hands thoroughly after handling
P272 - Contaminated work clothing must not be allowed out of the workplace.
P273 - Avoid release to the environment.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 - If on skin: Wash with plenty of water
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P321 - Specific treatment (see section 7 on this label)
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P363 - Wash contaminated clothing before reuse.
P370+P378 - In case of fire: Use appropriate media to extinguish
P403+P235 - Store in a well-ventilated place. Keep cool.

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P501 - Dispose of contents/container in accordance with local/regional/national/international regulations

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
Linalool	(CAS-No.) 78-70-6	10.18	Flam. Liq. 4, H227 Skin Irrit. 2, H315
Linalyl acetate	(CAS-No.) 115-95-7	8.85	Skin Irrit. 2, H315
Coumarin	(CAS-No.) 91-64-5	5.76	Acute Tox. 4 (Oral), H302 Skin Sens. 1B, H317
Benzyl benzoate	(CAS-No.) 120-51-4	5.02	Acute Tox. 4 (Oral), H302 Aquatic Acute 1, H400 Aquatic Chronic 2, H411
Geranyl acetate	(CAS-No.) 105-87-3	4.94	Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Chronic 3, H412
Eucalyptol	(CAS-No.) 470-82-6	2.23	Flam. Liq. 3, H226 Skin Sens. 1B, H317
Geraniol	(CAS-No.) 106-24-1	1.48	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317
Trichloromethyl phenyl carbonyl acetate	(CAS-No.) 90-17-5	1	Skin Irrit. 2, H315 Aquatic Chronic 3, H412
Geraniol	(CAS-No.) 106-24-1	0.17	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, 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 with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention. Specific treatment (see section 7 on this label). If skin irritation or rash occurs:
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. Rinse immediately with plenty of water.
First-aid measures after ingestion	: Get medical advice/attention.

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

Symptoms/effects after inhalation	: May cause an allergic skin reaction. May cause irritation or asthma-like symptoms.
Symptoms/effects after skin contact	: Causes skin irritation. May cause an allergic skin reaction.
Symptoms/effects after eye contact	: Causes serious eye irritation. Eye irritation.
Symptoms/effects after ingestion	: Ingestion may cause nausea and vomiting.

4.3. Immediate medical attention and special treatment, if necessary

No additional information available

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Foam. Dry powder. Water spray.

5.2. Specific hazards arising from the chemical

Fire hazard	: Combustible liquid.
Explosion hazard	: No direct explosion hazard.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Exercise caution when fighting any chemical fire.

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Protection during firefighting : Wear recommended personal protective equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking.

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.

Methods for cleaning up : Absorb spilled material with sand or earth.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapors are flammable. Keep away from {heat/sparks/open flames/hot surfaces}. - No smoking.

Precautions for safe handling : No open flames. No smoking. Avoid breathing dust/fume/gas/mist/vapours/spray.

Hygiene measures : Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed.

Storage conditions : Keep in fireproof place. Store in original container.

Incompatible materials : Heat sources.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

Benzyl benzoate (120-51-4)

No additional information available

Eucalyptol (470-82-6)

No additional information available

Linalool (78-70-6)

No additional information available

Coumarin (91-64-5)

No additional information available

Geraniol (106-24-1)

No additional information available

Geranyl acetate (105-87-3)

No additional information available

Geraniol (106-24-1)

No additional information available

Linalyl acetate (115-95-7)

No additional information available

Trichloromethyl phenyl carbonyl acetate (90-17-5)

No additional information available

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8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Protective goggles. Gloves.

Hand protection:

Wear protective gloves.

Eye protection:

Chemical goggles or safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

Wear appropriate mask

Personal protective equipment symbol(s):



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Color	: characteristic
Odor	: characteristic
Odor threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: 91 °C
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Non flammable.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Solubility	: No data available
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

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

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

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10.2. Chemical stability

Stable under normal conditions of use.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

May release flammable gases.

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

Benzyl benzoate (120-51-4)	
LD50 oral rat	> 2000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
Eucalyptol (470-82-6)	
LD50 dermal rat	> 2000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Guideline: EU Method B.3 (Acute Toxicity (Dermal))
Linalool (78-70-6)	
LD50 oral rat	2790 mg/kg body weight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), 95% CL: 2440 - 3180
LD50 dermal rabbit	5610 mg/kg body weight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), 95% CL: 3578 - 8374
Coumarin (91-64-5)	
LD50 oral rat	293 mg/kg body weight Animal: rat, Guideline: other:no data
LD50 dermal rat	293 mg/kg body weight Animal: rat, Guideline: other:no data
Geraniol (106-24-1)	
LD50 oral rat	3600 mg/kg body weight Animal: rat, 95% CL: 2840 - 4570
LD50 dermal rabbit	> 5000 mg/kg body weight Animal: rabbit
Geranyl acetate (105-87-3)	
LD50 oral rat	6330 mg/kg body weight Animal: rat, 95% CL: 5450 - 7340
Geraniol (106-24-1)	
LD50 oral rat	3600 mg/kg body weight Animal: rat, 95% CL: 2840 - 4570
LD50 dermal rabbit	> 5000 mg/kg body weight Animal: rabbit
Linalyl acetate (115-95-7)	
LD50 oral rat	> 9000 mg/kg body weight Animal: rat
Trichloromethyl phenyl carbinyl acetate (90-17-5)	
LD50 oral rat	2275.428 mg/kg body weight Animal: rat, Guideline: other:OECD Guideline 401 (Acute Oral Toxicity);OECD Guideline 434 (Acute Dermal Toxicity - Fixed Dose Procedure);OECD Guideline 402 (Acute Dermal Toxicity)
LD50 dermal rat	> 2000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)

Skin corrosion/irritation : Causes skin irritation.
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

Coumarin (91-64-5)	
IARC group	3 - Not classifiable

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Geraniol (106-24-1)	
NOAEL (chronic,oral,animal/male,2 years)	60 mg/kg body weight Animal: mouse, Animal sex: male, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies), Remarks on results: other:Effect type: toxicity (migrated information)

Geraniol (106-24-1)	
NOAEL (chronic,oral,animal/male,2 years)	60 mg/kg body weight Animal: mouse, Animal sex: male, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies), Remarks on results: other:Effect type: toxicity (migrated information)

Reproductive toxicity : Not classified

Trichloromethyl phenyl carbinyl acetate (90-17-5)	
NOAEL (animal/female, F0/P)	300 mg/kg body weight Animal: rabbit, Animal sex: female, Guideline: other:

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Benzyl benzoate (120-51-4)	
NOAEL (dermal, rat/rabbit, 90 days)	781 mg/kg body weight Animal: rat, Guideline: OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study)

Eucalyptol (470-82-6)	
NOAEL (oral, rat, 90 days)	600 mg/kg body weight Animal: rat, Animal sex: female, Guideline: other:japanese Ministry of Economy Trade and Industry Guideline for 28 day repeat oral dose toxicity study., Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents), Guideline: EPA OPPTS 870.3150 (90-Day Oral Toxicity in Nonrodents)

Linalool (78-70-6)	
NOAEL (dermal, rat/rabbit, 90 days)	250 mg/kg body weight Animal: rat, Guideline: OECD Guideline 411 (Subchronic Dermal Toxicity: 90-Day Study)

Geraniol (106-24-1)	
NOAEL (dermal, rat/rabbit, 90 days)	300 mg/kg body weight Animal: rat, Guideline: other:OECD Guideline 421 (Reproduction/Developmental Toxicity Screening test), Guideline: other:EPA OPPTS 870.3550 (Reproduction/Developmental Toxicity Screening Test)

Geranyl acetate (105-87-3)	
NOAEL (oral, rat, 90 days)	2000 mg/kg body weight Animal: rat, Guideline: other:Specifications for the Conduct of Studies to Evaluate the Toxic and Carcinogenic Potential of Chemical, Biological, and Physical Agents in Laboratory Animals for the National Toxicology Program (NTP)

Geraniol (106-24-1)	
NOAEL (dermal, rat/rabbit, 90 days)	300 mg/kg body weight Animal: rat, Guideline: other:OECD Guideline 421 (Reproduction/Developmental Toxicity Screening test), Guideline: other:EPA OPPTS 870.3550 (Reproduction/Developmental Toxicity Screening Test)

Linalyl acetate (115-95-7)	
NOAEL (dermal, rat/rabbit, 90 days)	250 mg/kg body weight Animal: rat, Guideline: OECD Guideline 411 (Subchronic Dermal Toxicity: 90-Day Study)

Trichloromethyl phenyl carbinyl acetate (90-17-5)	
NOAEL (oral, rat, 90 days)	500 mg/kg body weight Animal: rat, Guideline: other:

Aspiration hazard : Not classified

Viscosity, kinematic : No data available

Likely routes of exposure : Skin and eye contact.

Symptoms/effects after inhalation : May cause an allergic skin reaction. May cause irritation or asthma-like symptoms.

Symptoms/effects after skin contact : Causes skin irritation. May cause an allergic skin reaction.

Symptoms/effects after eye contact : Causes serious eye irritation. Eye irritation.

Symptoms/effects after ingestion : Ingestion may cause nausea and vomiting.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water : Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

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Benzyl benzoate (120-51-4)	
LC50 fish 1	2.32 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
EC50 Daphnia 1	3.09 mg/l Test organisms (species): Daphnia magna
Eucalyptol (470-82-6)	
LC50 fish 1	57 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 Daphnia 1	> 100 mg/l Test organisms (species): Daphnia magna
Linalool (78-70-6)	
LC50 fish 1	27.8 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 Daphnia 1	59 mg/l Test organisms (species): Daphnia magna
Coumarin (91-64-5)	
LC50 fish 1	1.324 mg/l Test organisms (species):
EC50 Daphnia 1	8.012 mg/l Test organisms (species): Daphnia sp.
Geraniol (106-24-1)	
LC50 fish 1	≈ 22 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
EC50 Daphnia 1	10.8 mg/l Test organisms (species): Daphnia magna
Geranyl acetate (105-87-3)	
LC50 fish 1	68.12 mg/l Test organisms (species): Leuciscus idus
EC50 Daphnia 1	14.1 mg/l Test organisms (species): Daphnia magna
Geraniol (106-24-1)	
LC50 fish 1	≈ 22 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
EC50 Daphnia 1	10.8 mg/l Test organisms (species): Daphnia magna
Linalyl acetate (115-95-7)	
LC50 fish 1	11 mg/l Test organisms (species): Cyprinus carpio
EC50 Daphnia 1	15 mg/l Test organisms (species): Daphnia magna
Trichloromethyl phenyl carbonyl acetate (90-17-5)	
LC50 fish 1	13.51073 mg/l Test organisms (species): Oryzias latipes

12.2. Persistence and degradability

Persistence and degradability	May cause long-term adverse effects in the environment.
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12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

Regional legislation (waste)	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Dispose of contents/container in accordance with local/regional/national/international regulations.
Additional information	: Handle empty containers with care because residual vapors are flammable.

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SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not regulated

Transportation of Dangerous Goods

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

SECTION 15: Regulatory information

15.1. US Federal regulations

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

All components of this product are listed as Active, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

15.2. International regulations

CANADA

Listed on the Canadian DSL (Domestic Substances List)

Benzyl benzoate (120-51-4)

Listed on the Canadian DSL (Domestic Substances List)

Eucalyptol (470-82-6)

Listed on the Canadian DSL (Domestic Substances List)

Linalool (78-70-6)

Listed on the Canadian DSL (Domestic Substances List)

Coumarin (91-64-5)

Listed on the Canadian DSL (Domestic Substances List)

Geraniol (106-24-1)

Listed on the Canadian DSL (Domestic Substances List)

Geranyl acetate (105-87-3)

Listed on the Canadian DSL (Domestic Substances List)

Geraniol (106-24-1)

Listed on the Canadian DSL (Domestic Substances List)

Linalyl acetate (115-95-7)

Listed on the Canadian DSL (Domestic Substances List)

Trichloromethyl phenyl carbonyl acetate (90-17-5)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Geraniol (106-24-1)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

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National regulations

No additional information available

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

SECTION 16: Other information

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Other information : None.

Full text of H-phrases:

H226	Flammable liquid and vapor
H227	Combustible liquid
H302	Harmful if swallowed
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H319	Causes serious eye irritation
H400	Very toxic to aquatic life
H401	Toxic to aquatic life
H411	Toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects

SDS US (GHS HazCom 2012)

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.