

SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



MISTLETOE MEETUP ISM 6447240

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	04/08/2026	300001304209	Date of first issue: 04/08/2026

SECTION 1. IDENTIFICATION

Product name : MISTLETOE MEETUP ISM 6447240

Sales Number : 6447240

SDS Number : 300001304209

Recommended use of the chemical and restrictions on use

Product Use Description : Fragrance Compound

Restrictions on use : For professional and industrial use only

Manufacturer or supplier's details

Company name of supplier : IFF Inc.

Address : 600 Highway 36
Hazlet NJ 07730

Telephone : (732) 264-4500

Telefax : (732) 335-2551

E-mail address : sds@iff.com

Emergency telephone number : +1 800 424 9300

This telephone number is available 24 hours per day, 7 days per week.

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Hazards for the product as supplied

Flammable liquids : Category 4

Skin sensitisation : Category 1

Other hazards

None known.

GHS label elements

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Hazard pictograms

:



Signal word

:

Warning

Hazard statements

:

H227 Combustible liquid.
H317 May cause an allergic skin reaction.

Precautionary statements

:

Prevention:

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 Avoid breathing mist or vapours.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of water.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture

:

Mixture

Chemical nature

:

Fragrance for consumer product

Components

Chemical name	CAS No./Unique ID	Concentration (% w/w)	Trade secret
4-TERT-BUTYLCYCLOHEXYL ACETATE	32210-23-4*	>= 25 - < 30	TSC
BENZYL BENZOATE	120-51-4*	>= 10 - <= 30	TSC
LINALOOL	78-70-6*	>= 1 - < 2.5	TSC
Octahydro Tetramethyl Naphthalenyl Ethanone	68155-66-8*	>= 1 - < 2.5	TSC
CINNAMAL	104-55-2*	>= 1 - <= 5	TSC
COUMARIN	91-64-5*	>= 0.5 - <= 1.5	TSC
ALPHA-METHYL CINNAMIC ALDEHYDE	101-39-3*	>= 0.5 - <= 1.5	TSC
EUCALYPTOL	470-82-6*	>= 0.5 - <= 1.5	TSC

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CINNAMYL ALCOHOL	104-54-1*	$\geq 0.5 - \leq 1.5$	TSC
EUGENOL	97-53-0*	$\geq 0.5 - \leq 1.5$	TSC
CITRAL	5392-40-5*	$\geq 0.1 - \leq 1$	TSC

* Indicates that the identifier is a CAS No.

TSC- the actual concentration or concentration range is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

- General advice : Take Hazard and Precautionary phrases (section 2) into account.
- If inhaled : Remove from exposure site to fresh air and keep at rest. Obtain medical advice.
- In case of skin contact : Remove contaminated clothes. Wash thoroughly with water (and soap). Contact physician if symptoms persist.
- In case of eye contact : Flush immediately with water for at least 15 minutes. Contact physician if symptoms persist.
- If swallowed : Rinse mouth with water and obtain medical advice.
- Most important symptoms and effects, both acute and delayed : May cause an allergic skin reaction.

Indication of any immediate medical attention and special treatment needed

- Treatment : Treat symptomatically.
- Notes to physician

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Carbondioxide, dry chemical, foam.
- Unsuitable extinguishing media : Do not use a direct waterjet on burning material.
- Specific hazards during fire-fighting : Water may be ineffective.
- Further information : Standard procedure for chemical fires.
- Special protective equipment : Wear NIOSH approved self-contained breathing apparatus

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for firefighters

and full protective clothing when fighting fires involving chemicals. Use water spray to cool containers exposed to fire.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Avoid inhalation and contact with skin and eyes. A self-contained breathing apparatus is recommended in case of a major spill.

Environmental precautions : Keep away from drains, surface- and groundwater and soil.

Methods and materials for containment and cleaning up : Clean up spillage promptly. Remove ignition sources. Provide adequate ventilation. Avoid excessive inhalation of vapours. Gross spillages should be contained by use of sand or inert powder and disposed of according to the local regulations.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion : Keep away from ignition sources and naked flame.

Advice on safe handling : Avoid excessive inhalation of concentrated vapors. Follow good manufacturing practices for housekeeping and personal hygiene. Wash any exposed skin immediately after any chemical contact, before breaks and meals, and at the end of each work period. Contaminated clothing and shoes should be thoroughly cleaned before re-use.

If appropriate, procedures used during the handling of this material should also be used when cleaning equipment or removing residual chemicals from tanks or other containers, especially when steam or hot water is used, as this may increase vapor concentrations in the workplace air. Where chemicals are openly handled, access should be restricted to properly trained employees.
Keep all heated processes at the lowest necessary temperature in order to minimize emissions of volatile chemicals into the air.

Conditions for safe storage : Store in a cool, dry, ventilated area away from heat sources. Keep containers upright and tightly closed when not in use.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
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citral	5392-40-5	TWA (Inhalable fraction and vapor)	5 ppm	ACGIH
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Engineering measures : Where feasible, isolate mixing rooms and other areas where this material is used or openly handled. Maintain these areas under negative air pressure relative to the rest of the plant. Where feasible, use closed systems to transfer and process this material

Personal protective equipment

Respiratory protection : Use local exhaust ventilation around open tanks and other open sources of potential exposures in order to avoid excessive inhalation, including places where this material is openly weighed or measured. In addition, use general dilution ventilation of the work area to eliminate or reduce possible worker exposures.
No respiratory protection is required during normal operations in a workplace where engineering controls such as adequate ventilation, etc. are sufficient.

If engineering controls and safe work practices are not sufficient, an approved, properly fitted respirator with organic vapor cartridges or canisters and particulate filters should be used:

- a) while engineering controls and appropriate safe work practices and/or procedures are being implemented; or
- b) during short term maintenance procedures when engineering controls are not in normal operation or are not sufficient; or
- c) if normal operational workplace vapor concentration in the air is increased due to heat ;
- d) during emergencies; or
- e) if engineering controls and operational practices are not sufficient to reduce airborne concentrations below an established occupational exposure limit.

Hand protection

Remarks : Avoid skin contact. Use chemically resistant gloves.

Eye protection : Use tight-fitting goggles, face shield or safety glasses with side shields if eye contact might occur.

Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.

Protective measures : In December 2003, the National Institute for Occupational Safety and Health ("NIOSH") published an Alert on preventing lung disease in workers who use or make flavorings [NIOSH Publication Number 2004-110].

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In August 2004, the United States Flavor and Extract Manufacturers Association (FEMA) issued a report entitled "Respiratory Safety in the Flavor Manufacturing Workplace". Both of these reports provide recommendations for reducing employee exposure and for medical surveillance in the workplace. The recommendations in these reports are generally applicable to the use of any chemical in the workplace and you are strongly urged to review both of these reports. The report published by FEMA also contains a list of "high priority" chemicals. If any of these chemicals are present in this product at a concentration $\geq 1.0\%$ due to an intentional addition by IFF, the chemical(s) will be identified in this safety data sheet.

Hygiene measures : To the extent deemed appropriate, implement pre-placement and regularly scheduled ascertainment of symptoms and spirometry testing of lung function for workers who are regularly exposed to this material.
To the extent deemed appropriate, use an experienced air sampling expert to identify and measure volatile chemicals that could be present in the workplace air to determine potential exposures and to ensure the continuing effectiveness of engineering controls and operational practices to minimize exposure.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: liquid
Odour	: conforms to standard
Melting point	: not determined
Boiling point	: not determined
Flash point	: 197.60 °F / 92.00 °C Method: closed cup
Evaporation rate	: not determined
Upper explosion limit / Upper flammability limit	: not determined
Lower explosion limit / Lower flammability limit	: not determined
Vapour pressure	: 0.1 hPa (68 °F / 20 °C) Calculated

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Relative vapour density	:	not determined
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Density	:	not determined
Water solubility	:	not determined
Solubility in other solvents	:	not determined
Partition coefficient: n-octanol/water	:	not determined
Auto-ignition temperature	:	not determined
Decomposition temperature	:	not determined
pH	:	not determined
Viscosity, dynamic	:	not determined
Viscosity, kinematic	:	not determined
Oxidizing properties	:	not determined
Molecular weight	:	not determined
Assessment	:	not determined
Particle size	:	not determined
Particle Size Distribution	:	not determined
Specific surface area	:	not determined
Surface charge/Zeta potential	:	not determined
Shape	:	not determined
Crystallinity	:	not determined
Surface treatment /Coatings	:	not determined

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No hazards to be specially mentioned.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Presents no significant reactivity hazard, by itself or in contact with water.

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Conditions to avoid	: Direct sources of heat.
Incompatible materials	: Avoid contact with strong acids, alkali or oxidizing agents.
Hazardous decomposition products	: Carbon monoxide and unidentified organic compounds may be formed during combustion.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity	: Acute toxicity estimate: 4,257 mg/kg Method: Calculation method
Acute inhalation toxicity	: Acute toxicity estimate: > 200 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: Calculation method
Acute dermal toxicity	: Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method

Components:

4-tert-butylcyclohexyl acetate:

Acute oral toxicity	: LD50 (Rat): 5,000 mg/kg Remarks: RIFM
Acute dermal toxicity	: LD50 (Rabbit): > 5,000 mg/kg

linalool:

Acute oral toxicity	: LD50 (Rat, male and female): 2,790 mg/kg Method: OECD Test Guideline 401 Test substance: (undiluted) GLP: no Remarks: REACH data
Acute inhalation toxicity	: see user defined free text:
Acute dermal toxicity	: LD50 (Rabbit): 5,610 mg/kg Method: OECD Test Guideline 402 Test substance: (undiluted) GLP: no Remarks: REACH data

1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthyl)ethan-1-one:

Acute oral toxicity	: LD50 (Rat, male and female): > 5,000 mg/kg Method: OECD Test Guideline 401
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GLP: no
Remarks: REACH data

Acute dermal toxicity : LD50 (Rat, male and female): > 5,000 mg/kg
Method: OECD Test Guideline 402
GLP: no
Remarks: REACH data

cinnamaldehyde:

Acute oral toxicity : LD50 (Rat, male and female): 2,220 mg/kg
GLP: no

Acute dermal toxicity : LD50 (Rabbit): 1,260 mg/kg

coumarin:

Acute oral toxicity : LD50 (Rat, male): 500 mg/kg

(2E)-2-methyl-3-phenylacrylaldehyde:

Acute oral toxicity : LD50 (Rat): 2,050 mg/kg
Remarks: RIFM

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg

cineole:

Acute oral toxicity : LD50 (Rat): 2,480 mg/kg
GLP: no
Remarks: REACH data

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg
GLP: no
Remarks: REACH data

cinnamyl alcohol:

Acute oral toxicity : LD50 (Rat, female): 2,000 mg/kg
Method: OECD Test Guideline 423
Test substance: (undiluted)
GLP: yes
Remarks: REACH data

eugenol:

Acute oral toxicity : Acute toxicity estimate: 2,500 mg/kg
Method: Expert judgement

Acute inhalation toxicity : LC50 (Rat, male and female): > 5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Remarks: REACH data

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citral:

Acute oral toxicity : LD50 (Rat, male and female): 6,800 mg/kg
GLP: no
Remarks: REACH data

Acute inhalation toxicity : (Rat, male and female): Exposure time: 7 h
GLP: no
Assessment: No data available
Remarks: REACH data

Acute toxicity (other routes of administration) : see user defined free text (Mouse):
Application Route: see user defined free text
GLP: no

Skin corrosion/irritation

Not classified based on available information.

Components:

4-tert-butylcyclohexyl acetate:

Species : human
Exposure time : 48 h
Method : closed patch test
Result : No skin irritation

Species : Rabbit
Exposure time : 24 h
Result : Skin irritation

linalool:

Species : Rabbit
Exposure time : 4 h
Assessment : Causes skin irritation.
Method : OECD Test Guideline 404
Result : Skin irritation
GLP : yes
Test substance : (undiluted)
Remarks : REACH data

1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthyl)ethan-1-one:

Species : reconstructed human epidermis (RhE)
Assessment : Causes skin irritation.
Method : OECD Test Guideline 439
Result : irritating
GLP : yes
Test substance : (undiluted)
Remarks : REACH data

cinnamaldehyde:

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Result : Skin irritation
Remarks : REACH data

coumarin:

Species : human
Exposure time : 24 h
Method : closed patch test
Result : No skin irritation

Species : Rabbit
Exposure time : 4 h
Assessment : No skin irritation
Method : Regulation (EC) No. 440/2008, Annex, B.4
Result : No skin irritation
GLP : yes
Remarks : REACH data

(2E)-2-methyl-3-phenylacrylaldehyde:

Species : human
Exposure time : 48 h
Method : closed patch test
Result : No skin irritation

Species : Rabbit
Exposure time : 24 h
Result : No skin irritation

cineole:

Species : reconstructed human epidermis (RhE)
Exposure time : 0.25 h
Method : OECD Test Guideline 439
Result : No skin irritation
GLP : yes
Remarks : REACH data

cinnamyl alcohol:

Species : Rat
Exposure time : 24 h
Assessment : No skin irritation
Result : No skin irritation
GLP : yes
Test substance : (undiluted)
Remarks : REACH data

Species : human
Exposure time : 24 h
Assessment : No skin irritation
Method : repeated insult patch test
Result : No skin irritation
Remarks : REACH data

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eugenol:

Species	: Rabbit
Exposure time	: 4 h
Assessment	: Causes mild skin irritation.
Method	: OECD Test Guideline 404
Result	: Mild skin irritation
GLP	: yes
Test substance	: (undiluted)
Remarks	: REACH data

citral:

Species	: Rabbit
Assessment	: Causes skin irritation.
Result	: irritating
GLP	: no
Remarks	: REACH data

Serious eye damage/eye irritation

Not classified based on available information.

Components:

4-tert-butylcyclohexyl acetate:

Species	: Rabbit
Result	: No eye irritation

linalool:

Species	: Rabbit
Result	: Eye irritation
Assessment	: Causes serious eye irritation.
Method	: OECD Test Guideline 405
GLP	: no
Remarks	: REACH data

1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthyl)ethan-1-one:

Result	: No eye irritation
Assessment	: No eye irritation
Method	: QSAR
Remarks	: REACH data

cinnamaldehyde:

Species	: human
Result	: Severe eye irritation
Exposure time	: 48 h
Test substance	: 8.0% in petrolatum

Species	: Rabbit
Result	: irritating

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Exposure time : 24 h
Assessment : Causes serious eye irritation.
Method : OECD Test Guideline 405
GLP : yes
Test substance : (undiluted)
Remarks : REACH data

coumarin:

Species : Rabbit
Result : No eye irritation
Exposure time : 96 h
Assessment : No eye irritation
GLP : yes
Test substance : (undiluted)
Remarks : REACH data

cineole:

Species : Bovine cornea
Result : no prediction can be made
Exposure time : 2 h
Method : OECD Test Guideline 437
GLP : yes
Remarks : REACH data

Species : Rabbit
Result : No eye irritation
Method : OECD Test Guideline 405
GLP : yes
Remarks : Based on data from similar materials
REACH data

cinnamyl alcohol:

Species : Rabbit
Result : No eye irritation
Assessment : No eye irritation
Test substance : 1.0%
Remarks : Based on data from similar materials
REACH data

eugenol:

Species : Rabbit
Result : Eye irritation
Exposure time : 7 d
Assessment : Causes serious eye irritation.
Method : OECD Test Guideline 405
Test substance : (undiluted)
Remarks : REACH data

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citral:

Species	: Rabbit
Result	: Eye irritation
Assessment	: Causes serious eye irritation.
Method	: OECD Test Guideline 405
Test substance	: (undiluted)
Remarks	: REACH data

Respiratory or skin sensitisation

Skin sensitisation

May cause an allergic skin reaction.

Respiratory sensitisation

Not classified based on available information.

Components:

4-tert-butylcyclohexyl acetate:

Test Type	: maximisation study
Species	: human
Result	: Did not cause sensitisation on laboratory animals.
Test substance	: 4.0% in petrolatum

linalool:

Test Type	: Local lymph node assay (LLNA)
Species	: Mouse
Assessment	: The product is a skin sensitiser, sub-category 1B.
Method	: OECD Test Guideline 429
Result	: The product is a skin sensitiser, sub-category 1B.
GLP	: yes
Remarks	: REACH data

1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthyl)ethan-1-one:

Test Type	: Local lymph node assay (LLNA)
Species	: Mouse
Assessment	: The product is a skin sensitiser, sub-category 1B.
Method	: OECD Test Guideline 429
Result	: Causes sensitisation.
GLP	: yes
Remarks	: REACH data

cinnamaldehyde:

Species	: Guinea pig
Assessment	: Probability or evidence of high skin sensitisation rate in humans
Method	: OECD Test Guideline 406
Result	: The product is a skin sensitiser, sub-category 1A.
GLP	: No information available.
Test substance	: 2.0%
Remarks	: REACH data

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Species : Guinea pig
Result : Causes sensitisation.
Test substance : 0.5%

coumarin:

Test Type : closed patch test
Species : human
Assessment : The product is a skin sensitiser, sub-category 1B.
Result : Causes sensitisation.
Test substance : 2.0%
Remarks : REACH data

(2E)-2-methyl-3-phenylacrylaldehyde:

Test Type : maximisation study
Species : human
Result : Did not cause sensitisation on laboratory animals.
Test substance : 8.0% in petrolatum

cineole:

Test Type : Local lymph node assay (LLNA)
Species : Mouse
Assessment : The product is a skin sensitiser, sub-category 1B.
Method : OECD 429
Result : positive
GLP : yes
Remarks : REACH data

cinnamyl alcohol:

Test Type : Local lymph node assay (LLNA)
Species : Mouse
Assessment : The product is a skin sensitiser, sub-category 1B.
Method : OECD Test Guideline 429
Result : The product is a skin sensitiser, sub-category 1B.
Remarks : REACH data

Test Type : Freund's complete adjuvant test
Species : Guinea pig
Assessment : The product is a skin sensitiser, sub-category 1B.
Result : The product is a skin sensitiser, sub-category 1B.
Remarks : REACH data

eugenol:

Test Type : Local lymph node assay (LLNA)
Species : Mouse
Assessment : The product is a skin sensitiser, sub-category 1B.
Method : OECD Test Guideline 429
Result : The product is a skin sensitiser, sub-category 1B.
Remarks : REACH data

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Test Type : maximisation study
Species : Guinea pig
Assessment : The product is a skin sensitiser, sub-category 1B.
Method : OECD Test Guideline 406
Result : The product is a skin sensitiser, sub-category 1B.
Remarks : REACH data

citral:

Test Type : Maximisation Test
Species : Guinea pig
Assessment : May cause sensitisation by skin contact.
Method : OECD Test Guideline 406
Result : Causes sensitisation.
GLP : no
Remarks : REACH data

Test Type : Local lymph node assay (LLNA)
Species : Mouse
Assessment : May cause sensitisation by skin contact.
Method : OECD Test Guideline 429
Result : Causes sensitisation.
Remarks : REACH data

Germ cell mutagenicity

Not classified based on available information.

Components:

linalool:

Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test
Test system: mouse lymphoma cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative
GLP: yes
Remarks: REACH data

Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative
GLP: yes
Remarks: REACH data

Test Type: Microbial mutagenesis assay (Ames test)
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: yes

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Remarks: REACH data

Genotoxicity in vivo : Test Type: In vivo micronucleus test
Species: Mouse (male and female)
Application Route: Oral
Method: OECD Test Guideline 474
Result: negative
GLP: yes
Remarks: REACH data

1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthyl)ethan-1-one:

Genotoxicity in vitro : Test Type: Microbial mutagenesis assay (Ames test)
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: yes
Remarks: REACH data

Test Type: Microbial mutagenesis assay (Ames test)
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: yes
Remarks: REACH data

Test Type: Chromosome aberration test in vitro
Test system: Human lymphocytes
Metabolic activation: with and without metabolic activation
Method: OECD 473
Result: negative
GLP: yes
Remarks: REACH data

Test Type: In vitro mammalian cell gene mutation test
Test system: mouse lymphoma cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative
GLP: yes
Remarks: REACH data

Genotoxicity in vivo : Test Type: In vivo micronucleus test
Species: Mouse (male and female)
Application Route: Dermal
Method: OECD Test Guideline 474
Result: negative
GLP: yes

Test Type: In vivo micronucleus test
Species: Rat (male and female)

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Application Route: Dermal
Method: OECD Test Guideline 474
Result: negative
GLP: yes

cinnamaldehyde:

Genotoxicity in vitro : Test Type: Ames test
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: yes
Remarks: REACH data

Genotoxicity in vivo : Test Type: In vivo micronucleus test
Species: Mouse (male)
Application Route: Oral
Result: negative
Remarks: REACH data

coumarin:

Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative
GLP: No information available.
Remarks: REACH data

Test Type: reverse mutation assay
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: No information available.
Remarks: REACH data

Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative
GLP: No information available.
Remarks: REACH data

cineole:

Genotoxicity in vitro : Test Type: reverse mutation assay
Test system: TA1535
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

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Remarks: REACH data

Test Type: reverse mutation assay
Test system: TA1537
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
Remarks: REACH data

Test Type: reverse mutation assay
Test system: TA100
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
Remarks: REACH data

Test Type: reverse mutation assay
Test system: TA98
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
Remarks: REACH data

cinnamyl alcohol:

Genotoxicity in vitro

: Test Type: Microbial mutagenesis assay (Ames test)
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Result: negative
Remarks: REACH data

Test Type: Microbial mutagenesis assay (Ames test)
Test system: Escherichia coli
Metabolic activation: with and without metabolic activation
Result: negative
Remarks: REACH data

Test Type: In vitro mammalian cell gene mutation test
Test system: mouse lymphoma cells
Metabolic activation: with and without metabolic activation
Result: negative
Remarks: REACH data

Test Type: Microbial mutagenesis assay (Ames test)
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: yes
Remarks: Based on data from similar materials
REACH data

Test Type: sister chromatid exchange assay

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Test system: Chinese hamster cells
Result: negative
Remarks: REACH data

eugenol:

Genotoxicity in vitro

: Test Type: unscheduled DNA synthesis assay
Test system: mammalian cells
Method: OECD Test Guideline 482
Result: negative
GLP: no
Remarks: REACH data

Test Type: Microbial mutagenesis assay (Ames test)
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
Remarks: REACH data

Test Type: Microbial mutagenesis assay (Ames test)
Test system: Escherichia coli
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
Remarks: REACH data

Genotoxicity in vivo

: Test Type: In vivo micronucleus test
Species: Rat (female)
Application Route: Oral
Method: OECD Test Guideline 474
Result: negative
Remarks: REACH data

Test Type: Transgenic rodent somatic cell gene mutation assay
Species: Mouse (male)
Application Route: Ingestion
Method: OECD Test Guideline 488
Result: negative
Remarks: REACH data

citral:

Genotoxicity in vitro

: Test Type: Microbial mutagenesis assay (Ames test)
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
Remarks: REACH data

Test Type: In vitro mammalian cell gene mutation test
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation

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Method: OECD Test Guideline 476

Result: negative

GLP: yes

Remarks: REACH data

Test Type: Chromosome aberration test in vitro

Test system: Chinese hamster ovary cells

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 473

Result: negative

Remarks: REACH data

Test Type: sister chromatid exchange assay

Test system: Chinese hamster ovary cells

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 479

Result: negative

Remarks: REACH data

Genotoxicity in vivo

: Test Type: In vivo micronucleus test

Species: Mouse (male and female)

Strain: B6C3F1

Application Route: Ingestion

Method: OECD Test Guideline 474

Result: negative

Remarks: REACH data

Carcinogenicity

Not classified based on available information.

Components:

cinnamaldehyde:

Species	: Rat, male and female
Application Route	: Oral
NOAEL	: 200 mg/kg body weight
Method	: OECD Test Guideline 453
Result	: negative
GLP	: No information available.
Remarks	: REACH data

coumarin:

Species	: Rat, male and female
Application Route	: Oral
NOAEL	: > 100 mg/kg bw/day
Method	: carcinogenicity study
GLP	: no
Remarks	: REACH data

eugenol:

Species	: Rat, male and female
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Application Route : Ingestion
Activity duration : 730 d
Method : OECD Test Guideline 451
Result : negative
Remarks : REACH data

Species : Mouse, male and female
Application Route : Ingestion
Activity duration : 730 d
Method : OECD Test Guideline 451
Result : negative
Remarks : REACH data

citral:

Species : Rat, male and female
Application Route : Ingestion
Activity duration : 735 d
NOAEL : 100 mg/kg body weight
LOAEL : 210 mg/kg body weight
Method : OECD Test Guideline 453
GLP : yes
Remarks : REACH data

Species : Mouse, male
Application Route : Ingestion
Activity duration : 735 d
NOAEL : 60 mg/kg body weight
LOAEL : 120 mg/kg body weight
Method : OECD Test Guideline 453
GLP : yes
Remarks : REACH data

Species : Mouse, female
Application Route : Ingestion
Activity duration : 735 d
LOAEL : 60 mg/kg body weight
Method : OECD Test Guideline 453
GLP : yes
Remarks : REACH data

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

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Components:

linalool:

Effects on fertility : Test Type: reproductive and developmental toxicity study
Species: Rat, male
Application Route: Oral
General Toxicity - Parent: NOAEL: 750 mg/kg body weight
General Toxicity F1: NOAEL: 200 mg/kg body weight
Method: OECD Test Guideline 421
GLP: yes

Test Type: reproductive and developmental toxicity study
Species: Rat, female
Application Route: Oral
General Toxicity - Parent: NOAEL: 200 mg/kg body weight
General Toxicity F1: NOAEL: 200 mg/kg body weight
Method: OECD Test Guideline 421
GLP: yes

Effects on foetal development : Test Type: Pre-natal
Species: Rat, female
Application Route: Oral
Duration of Single Treatment: 11 d
Frequency of Treatment: 1 daily
General Toxicity Maternal: NOAEL: 500 mg/kg body weight
Developmental Toxicity: NOAEL: 1,000 mg/kg body weight
GLP: yes
Remarks: REACH data

1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthyl)ethan-1-one:

Effects on fertility : Test Type: reproductive and developmental toxicity study
Species: Rat, male and female
Strain: wistar
Application Route: Oral
General Toxicity - Parent: NOAEL: >= 300 mg/kg body weight
Fertility: NOAEL: >= 300 mg/kg body weight
Method: OECD Test Guideline 443
GLP: yes
Remarks: REACH data

Test Type: reproductive and developmental toxicity study
Species: Rat, male and female
Strain: wistar
Application Route: Oral
General Toxicity - Parent: NOAEL: 120 mg/kg body weight
Fertility: NOAEL: >= 500 mg/kg body weight
Target Organs: Kidney, Liver, spleen
Method: OECD Test Guideline 421
GLP: yes
Remarks: REACH data

Effects on foetal development : Test Type: Pre-natal

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Species: Rat, female
Application Route: Oral
Duration of Single Treatment: 21 d
Frequency of Treatment: 1 daily
General Toxicity Maternal: NOAEL: 240 mg/kg body weight
Developmental Toxicity: NOAEL: >= 480 mg/kg body weight
Method: OECD Test Guideline 414
GLP: yes
Remarks: REACH data

Test Type: Pre-natal
Species: Rabbit, female
Application Route: Oral
Duration of Single Treatment: 23 d
Frequency of Treatment: 1 daily
General Toxicity Maternal: NOAEL: 200 mg/kg body weight
Developmental Toxicity: NOAEL: >= 500 mg/kg body weight
Method: OECD Test Guideline 414
GLP: yes
Remarks: REACH data

cinnamaldehyde:

Effects on foetal development

: Test Type: Pre-natal
Species: Rat, female
Strain: wistar
Application Route: Oral
Duration of Single Treatment: 16 d
Frequency of Treatment: 1
General Toxicity Maternal: NOAEL: 250 mg/kg body weight
Developmental Toxicity: NOAEL: 250 mg/kg body weight
Method: OECD Test Guideline 414
GLP: yes
Remarks: REACH data

cineole:

Effects on fertility

: Test Type: reproductive and developmental toxicity study
Species: Rat
Dose: 600 mg/kg bw/day
Method: OECD Test Guideline 421
Result: Not classified
GLP: yes
Remarks: REACH data

cinnamyl alcohol:

Effects on fertility

: Test Type: reproductive and developmental toxicity study
Species: Rat, male and female
Application Route: Oral
General Toxicity - Parent: NOAEL: 350 mg/kg body weight
General Toxicity F1: NOAEL: 350 mg/kg body weight
Fertility: NOAEL: 350 mg/kg body weight
Method: OECD Test Guideline 421

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GLP: yes
Remarks: REACH data

Effects on foetal development : Test Type: reproductive and developmental toxicity study
Species: Rat, female
Application Route: Oral
General Toxicity Maternal: NOAEL: 350 mg/kg body weight
Developmental Toxicity: NOAEL: 350 mg/kg body weight
Method: OECD Test Guideline 421
GLP: yes
Remarks: REACH data

Test Type: Pre-natal
Species: Rat, female
Application Route: Oral
General Toxicity Maternal: NOAEL: 53.5 mg/kg body weight
Developmental Toxicity: NOAEL: 53.5 mg/kg body weight
Method: OECD Test Guideline 414
Remarks: REACH data

Test Type: reproductive and developmental toxicity study
Species: Rat, female
Application Route: Oral
Duration of Single Treatment: 64 d
Frequency of Treatment: 1 daily
General Toxicity Maternal: NOAEL: 556 mg/kg body weight
Developmental Toxicity: NOAEL: 556 mg/kg body weight
Method: OECD Test Guideline 422
GLP: yes
Remarks: Based on data from similar materials
REACH data

eugenol:

Effects on fertility : Test Type: Two-generation study
Species: Rat, male and female
Application Route: Oral
Dose: ≥ 700 mg/kg bw/day
General Toxicity - Parent: LOAEL: ≤ 70 mg/kg body weight
General Toxicity F1: NOAEL: ≥ 230 mg/kg body weight
Fertility: NOAEL: ≥ 700 mg/kg body weight
Method: OECD Test Guideline 416
GLP: yes
Remarks: Based on data from similar materials
REACH data

Effects on foetal development : Test Type: Pre-natal
Species: Rat, female
Application Route: Oral
Duration of Single Treatment: 13 d
General Toxicity Maternal: LOAEL: 250 mg/kg body weight
Developmental Toxicity: NOAEL: 500 mg/kg body weight
Method: OECD Test Guideline 414

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Result: No teratogenic effects
GLP: yes
Remarks: Based on data from similar materials
REACH data

citral:

Effects on fertility : Test Type: reproductive and developmental toxicity study
Species: Rat, male and female
Application Route: Oral
Dose: 1000 mg/kg bw/day
General Toxicity - Parent: NOAEL: 200 mg/kg body weight
Fertility: NOAEL: 1,000 mg/kg body weight
Method: OECD Test Guideline 421
GLP: yes
Remarks: REACH data

Test Type: reproductive and developmental toxicity study
Species: Rat, male and female
Application Route: Oral
Fertility: NOAEL Parent: 250 mg/kg body weight
Method: OECD Test Guideline 443
GLP: yes
Remarks: REACH data

Effects on foetal development : Test Type: Pre-natal
Species: Rabbit
Strain: NZW
Application Route: Oral
Duration of Single Treatment: 23 d
General Toxicity Maternal: NOAEL: 60 mg/kg body weight
Developmental Toxicity: NOAEL: 60 mg/kg body weight
Method: OECD Test Guideline 414
Result: Not classified
GLP: yes
Remarks: REACH data

Test Type: Pre-natal
Species: Rat
Strain: wistar
Application Route: Oral
Duration of Single Treatment: 10 d
General Toxicity Maternal: NOAEL: 60 mg/kg body weight
Developmental Toxicity: NOAEL: 60 mg/kg body weight
Method: OECD Test Guideline 414
Remarks: REACH data

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

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Repeated dose toxicity

Components:

linalool:

Species	: Rat, male
NOAEL	: >= 532.1 mg/kg
Application Route	: Ingestion
Exposure time	: 96 d
Method	: OECD Test Guideline 408
Test substance	: (undiluted)
GLP	: yes
Remarks	: REACH data

Species	: Rat, female
NOAEL	: >= 497.9 mg/kg
Application Route	: Ingestion
Exposure time	: 95 d
Method	: OECD Test Guideline 408
Test substance	: (undiluted)
GLP	: yes
Remarks	: REACH data

Species	: Rat, male and female
NOAEL	: 250 mg/kg
Application Route	: Dermal
Exposure time	: 91 d
Method	: OECD Test Guideline 411
Test substance	: (undiluted)
GLP	: yes
Remarks	: REACH data

1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthyl)ethan-1-one:

Species	: Rat, male and female
NOAEL	: 150 mg/kg
Application Route	: Oral
Exposure time	: 28-day
Number of exposures	: 1x /day
Method	: OECD Test Guideline 407
GLP	: yes
Remarks	: REACH data

Species	: Rat, male and female
NOAEL	: 120 mg/kg
Application Route	: Oral
Exposure time	: 90-day
Number of exposures	: 1x /day
Method	: OECD Test Guideline 408
GLP	: yes
Target Organs	: spleen, Liver, Kidney
Remarks	: REACH data

Species	: Rat, male and female
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NOAEL : 250 mg/kg
Application Route : Dermal
Exposure time : 90-day
Method : OECD Test Guideline 411
GLP : yes
Target Organs : Skin, Liver
Remarks : REACH data

Species : Mouse, male and female
NOAEL : 500 mg/kg
Application Route : Dermal
Exposure time : 90-day
Method : OECD Test Guideline 411
GLP : yes
Target Organs : Skin, Liver
Remarks : REACH data

cinnamaldehyde:

Species : Rat, male and female
NOAEL : 275 mg/kg
LOAEL : 570 mg/kg
Application Route : Oral
Exposure time : 90-day
Number of exposures : 1x /day
Method : OECD Test Guideline 408
GLP : yes
Remarks : REACH data

coumarin:

Species : Mouse, male and female
NOAEL : 138.3 mg/kg
NOAEL : 138.3 mg/kg
Application Route : Oral
Exposure time : 90-day
Number of exposures : 1x /day
GLP : No information available.
Remarks : REACH data

cineole:

Species : Rat, male and female
NOAEL : 600 mg/kg bw
Application Route : Oral
Exposure time : 28-day
Number of exposures : 1x /day
Method : OECD Test Guideline 407
GLP : yes
Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
Remarks : REACH data

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cinnamyl alcohol:

Species : Rat, male and female
NOAEL : 1,000 mg/kg
Application Route : Oral
Exposure time : 28-day
Number of exposures : 1x /day
Method : OECD Test Guideline 407
GLP : yes
Remarks : REACH data

Species : Rat, male
NOAEL : 53.5 mg/kg
Application Route : Oral
Exposure time : 120 d
Number of exposures : 1x /day
Method : OECD Test Guideline 452
Remarks : REACH data

Species : Rat
LOAEL : 6,366 mg/kg
Application Route : Oral
Remarks : REACH data

eugenol:

Species : Rat, male
NOAEL : ca. 600 mg/kg
LOAEL : ca. 1,250 mg/kg
Application Route : Ingestion
Exposure time : 90 d
Number of exposures : 1x /day
Method : OECD Test Guideline 408
Remarks : REACH data

Species : Rat, female
NOAEL : >= 1,250 mg/kg
Application Route : Ingestion
Exposure time : 90 d
Number of exposures : 1x /day
Method : OECD Test Guideline 408
Remarks : REACH data

Species : Mouse, male and female
NOAEL : >= 900 mg/kg
Application Route : Ingestion
Exposure time : 90 d
Number of exposures : 1x /day
Method : OECD Test Guideline 408
Remarks : REACH data

citral:

Species : Rat, male

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LOAEL : 345 mg/kg
LOAEL : 345 mg/kg
Application Route : Ingestion
Exposure time : 90 d
Method : OECD Test Guideline 408
GLP : yes
Remarks : REACH data

Species : Rat, female
LOAEL : 335 mg/kg
LOAEL : 335 mg/kg
Application Route : Ingestion
Exposure time : 90 d
Method : OECD Test Guideline 408
GLP : yes
Remarks : REACH data

Species : Mouse, male
LOAEL : 745 mg/kg
LOAEL : 745 mg/kg
Application Route : Ingestion
Exposure time : 90 d
Method : OECD Test Guideline 408
GLP : yes
Remarks : REACH data

Species : Mouse, female
LOAEL : 790 mg/kg
LOAEL : 790 mg/kg
Application Route : Ingestion
Exposure time : 90 d
Method : OECD Test Guideline 408
GLP : yes
Remarks : REACH data

Species : Rat, male and female
LOAEL : 210 mg/kg
NOAEL : 100 mg/kg
Application Route : Ingestion
Exposure time : 735 d
Method : OECD Test Guideline 453
GLP : yes
Remarks : REACH data

Species : Mouse, male
LOAEL : 120 mg/kg
NOAEL : 60 mg/kg
LOAEL : 120 mg/kg
Application Route : Ingestion
Exposure time : 735 d
Method : OECD Test Guideline 453
GLP : yes
Remarks : REACH data

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Species	: Mouse, female
LOAEL	: 60 mg/kg
LOAEL	: 60 mg/kg
Application Route	: Ingestion
Exposure time	: 735 h
Method	: OECD Test Guideline 453
GLP	: yes
Remarks	: REACH data

Aspiration toxicity

Not classified based on available information.

SECTION 12. ECOLOGICAL INFORMATION

Ecological information

Additional ecological information : Avoid contamination of soil, ground and surface water.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	: Dispose of according to local regulations. Avoid disposing into drainage systems and into the environment.
Contaminated packaging	: Place material into sealed containers and dispose of in accordance with local, state and federal regulations.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR

UN/ID No.	: UN 3082
Proper shipping name	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (BENZYL BENZOATE, Octahydro Tetramethyl Naphthalenyl Ethanone)
Class	: 9
Packing group	: III
Labels	: 9
Packing instruction (cargo aircraft)	: 964
Packing instruction (passenger aircraft)	: 964
Environmentally hazardous	: yes

IMDG-Code

UN number	: UN 3082
Proper shipping name	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

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	N.O.S. (BENZYL BENZOATE, Octahydro Tetramethyl Naphthalenyl Ethanone)
Class	: 9
Packing group	: III
Labels	: 9
EmS Code	: F-A, S-F
Marine pollutant	: yes

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

49 CFR

UN/ID/NA number	: NA 1993
Proper shipping name	: COMBUSTIBLE LIQUID, N.O.S. (EUCALYPTOL)
Class	: CBL
Packing group	: III
Labels	: NONE
ERG Code	: 128
Marine pollutant	: no
Remarks	: Above applies only to containers over 119 gallons or 450 li- ters. Not regulated if shipped in packages less than or equal to 119 gallons (450 liters).

Special precautions for user

Remarks : 49CFR: no dangerous good in non-bulk packaging

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

CERCLA Reportable Quantity

Listed substances in the product are at low enough levels to not be expected to exceed the RQ

SARA 304 Extremely Hazardous Substances Reportable Quantity

Listed substances in the product are at low enough levels to not be expected to exceed the RQ

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Flammable (gases, aerosols, liquids, or solids)
Respiratory or skin sensitisation

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

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The components of this product are reported in the following inventories:

US TSCA : All substances listed as active on the TSCA inventory

TSCA list

The following substance(s) is/are subject to a Significant New Use Rule:

1-(2,4-dimethylcyclohex-3-en-1-yl)propan-1-ol 1632042-40-0

No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
ACGIH / TWA : 8-hour, time-weighted average

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonised System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organisation; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardisation; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organisation for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



MISTLETOE MEETUP ISM 6447240

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