SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

Cobalt Blue 6219146

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	31.10.2023	300001122170	Date of first issue: 31.10.2023

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name : Cobalt Blue 6219146

Sales Number : 6219146

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the Substance/Mixture : Fragrance for consumer product

1.3 Details of the supplier of the safety data sheet

Company : Buff City Soap LLC
5294 Belt Line Rd Suite 100
Dallas, TX 75254

Telephone : +18444687627

E-mail address of person responsible for the SDS : Support@buffcitysoap.com

1.4 Emergency telephone number

+18333360131

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Eye irritation, Category 2	H319: Causes serious eye irritation.
Skin sensitisation, Category 1	H317: May cause an allergic skin reaction.
Long-term (chronic) aquatic hazard, Category 3	H412: Harmful to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal word : Warning

Hazard statements : H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**

P261 Avoid breathing mist or vapours.
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/ eye protection/ face protection.

Response:

P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Hazardous components which must be listed on the label:

68155-66-8, 54464-57-2, 68155-67-9, 54464-59-4	Tetramethyl Acetyloctahydronaphthalenes
67634-15-5, 67634-14-4	ETHYL 2,2-DIMETHYLHYDROCINNAMAL
476332-65-7	Heptamethyl Decahydroindenofuran
470-82-6	EUCALYPTOL
10339-55-6	Ethyl Linalool
78-70-6	linalool
79-78-7	ALLYL ALPHA-IONONE
127-51-5	Alpha-Isomethyl Ionone
253454-23-8	TRIMETHYL-PROPYLCYCLOHEXANEPROPANOL
53243-59-7, 53243-60-0, 93893-89-1	(Z) - 3 - methyl - 5 - phenylpent - 2 - enenitrile

2.3 Other hazards

None reasonably foreseeable.

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
cis-2-tert-butylcyclohexyl acetate	88-41-5 243-718-1 01-2119970713-33	Aquatic Chronic 2; H411	>= 2,5 - < 10
2,6-dimethyloct-7-en-2-ol	18479-58-8 242-362-4 01-2119457274-37	Eye Irrit. 2; H319 Skin Irrit. 2; H315 STOT SE 3; H336	>= 1 - < 10
1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthyl)ethan-1-one	68155-66-8 915-730-3 01-2119489989-04	Skin Irrit. 2; H315 Skin Sens. 1B; H317 Aquatic Chronic 2; H411	>= 1 - < 2,5
octahydro-2H-1-benzopyran-2-one	4430-31-3 224-623-4	Eye Dam. 1; H318	>= 1 - < 3
(2E)-2-ethyl-4-(2,2,3-trimethylcyclopent-3-en-1-yl)but-2-en-1-ol	28219-61-6 701-122-3 01-2119529224-45	Eye Irrit. 2; H319 Aquatic Chronic 2; H411 Skin Irrit. 2; H315 M-Factor (Acute aquatic toxicity): 1	>= 1 - < 2,5
1-[(2-tert-butylcyclohexyl)oxy]butan-2-ol	139504-68-0 412-300-2 603-154-00-2 01-0000015959-52	Aquatic Chronic 2; H411 Eye Irrit. 2; H319	>= 1 - < 2,5
tetrahydro-2-isobutyl-4-methylpyran-4-ol, mixed isomers (cis and trans)	63500-71-0 405-040-6 603-101-00-3 01-0000015458-64, 01-2119455547-30	Eye Irrit. 2; H319	>= 1 - < 10
Reaction mass of 3-(o-ethylphenyl)-2,2-dimethylpropionaldehyde and 3-(pethylphenyl)-2,2-dimethylpropionaldehyde	67634-15-5 916-329-6 01-2120758796-34	Skin Irrit. 2; H315 Skin Sens. 1B; H317 Aquatic Acute 1; H400 Aquatic Chronic 2; H411	>= 0,25 - < 1
decahydro heptamethyl indenofuran	476332-65-7 449-360-4 01-0000018977-51	Skin Sens. 1B; H317 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 1	>= 0,25 - < 1

cineole	470-82-6 207-431-5 01-2119967772-24	Flam. Liq. 3; H226 Skin Sens. 1B; H317 Eye Irrit. 2; H319	>= 0,1 - < 1
3,7-dimethylnona-1,6-dien-3-ol	10339-55-6 233-732-6 01-2119969272-32	Skin Irrit. 2; H315 Eye Irrit. 2; H319 Skin Sens. 1B; H317	>= 0,1 - < 1
allyl (cyclohexyloxy)acetate	68901-15-5 272-657-3 01-2120770514-54	Acute Tox. 4; H302 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	>= 0,25 - < 1
linalool	78-70-6 201-134-4 603-235-00-2 01-2119474016-42	Skin Irrit. 2; H315 Eye Irrit. 2; H319 Skin Sens. 1B; H317	>= 0,1 - < 1
2,6-di-tert-butyl-p-cresol	128-37-0 204-881-4 01-2119565113-46, 01-2119555270-46	Aquatic Chronic 1; H410 Aquatic Acute 1; H400	>= 0,25 - < 1
1-(2,6,6-trimethyl-2-cyclohexen-1-yl)hepta-1,6-dien-3-one	79-78-7 201-225-9	Skin Sens. 1B; H317 Aquatic Chronic 2; H411	>= 0,25 - < 1
allyl heptanoate	142-19-8 205-527-1	Acute Tox. 3; H301 Acute Tox. 3; H311 Aquatic Chronic 3; H412 Aquatic Acute 1; H400 M-Factor (Acute aquatic toxicity): 1	>= 0,1 - < 0,25
(+/-) trans-3,3-dimethyl-5-(2,2,3-trimethyl-cyclopent-3-en-1-yl)pent-4-en-2-ol	107898-54-4 411-580-3 603-150-00-0 01-0000015895-58, 01-2119956812-31, 01-0000000316-81	Skin Irrit. 2; H315 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 1	>= 0,1 - < 0,25
RM of (3E)-3-methyl-4-(2,6,6-trimethylcyclohex-2-en-1-yl)but-3-en-2-one & (1E)-1-(2,6,6-trimethylcyclohex-2-en-1-yl)pent-1-en-3-one	127-51-5 204-846-3	Aquatic Chronic 2; H411 Skin Sens. 1B; H317 M-Factor (Acute aquatic toxicity): 1	>= 0,1 - < 0,25
rel-1-[(1R,6S)-2,2,6-trimethylcyclohexyl]hexan-3-ol	253454-23-8 814-113-5 01-2120766836-38, 01-2120768938-30	Skin Sens. 1B; H317 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	>= 0,1 - < 0,25
(Z) - 3 - methyl - 5 - phenylpent - 2 - enenitrile	53243-59-7 258-447-4 01-2120743785-44-	Acute Tox. 4; H302 Skin Sens. 1A; H317 Aquatic Chronic 3;	>= 0,1 - < 0,25

		H412	

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of 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. If victim is unconscious, remove foreign bodies from the mouth. If victim has stopped breathing, give artificial respiration. 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.

4.2 Most important symptoms and effects, both acute and delayed

Risks : May cause an allergic skin reaction.
Causes serious eye irritation.

4.3 Indication of any immediate medical attention and special treatment needed

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Carbondioxide, dry chemical, foam.

Unsuitable extinguishing media : Do not use a direct waterjet on burning material.

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : Water may be ineffective.

5.3 Advice for firefighters

Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

Further information : Standard procedure for chemical fires.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Avoid inhalation and contact with skin and eyes. A self-contained breathing apparatus is recommended in case of a major spill.
Prevent spreading over a wide area (e.g. by containment or oil barriers).

6.2 Environmental precautions

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

6.3 Methods and material for containment and cleaning up

Methods for 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.

6.4 Reference to other sections

SECTION 7: Handling and storage

7.1 Precautions for safe handling

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.

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

7.2 Conditions for safe storage, including any incompatibilities

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

7.3 Specific end use(s)

Specific use(s) : No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthyl)ethan-1-one	Workers	Skin contact	Long-term local effects	0,1011 mg/cm2
Remarks:	Exposure time: 8 h			
	Workers	Skin contact	Long-term systemic effects	1,73 mg/kg bw/day
Remarks:	Exposure time: 8 h			
	Workers	Inhalation	Long-term systemic effects	1,76 mg/m3
Remarks:	Exposure time: 8 h			
(2E)-2-ethyl-4-(2,2,3-trimethylcyclopent-3-en-1-yl)but-2-en-1-ol	Workers	Inhalation	Long-term systemic effects	21 mg/m3
Remarks:	REACH data			
	Workers	Dermal	Long-term systemic effects	6 mg/kg bw/day
Remarks:	REACH data			
	General population	Inhalation	Long-term systemic effects	5,2 mg/m3
Remarks:	REACH data			
	General population	Dermal	Long-term systemic effects	3 mg/kg bw/day
Remarks:	REACH data			
	General population	Oral	Long-term systemic effects	3 mg/kg bw/day
Remarks:	REACH data			
octahydro-2H-1-benzopyran-2-one	Workers	Inhalation	Long-term systemic effects	6,3 mg/m3
Remarks:	REACH data			
	Workers	Dermal	Long-term systemic effects	1,8 mg/kg
Remarks:	REACH data			
	General population	Oral	Long-term systemic effects	1,1 mg/kg
Remarks:	REACH data			
	General population	Inhalation	Long-term systemic effects	1,9 mg/m3
Remarks:	REACH data			
	General population	Dermal	Long-term systemic effects	1,1 mg/kg
Remarks:	REACH data			

8.2 Exposure controls

Engineering measures

Where appropriate, use closed systems to transfer and process this material.
If appropriate, 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.

Personal protective equipment

Eye protection	:	Use tight-fitting goggles, face shield or safety glasses with side shields if eye contact might occur. Equipment should conform to EN 166
Hand protection		
Material	:	Nitrile rubber
Break through time	:	> 60 min
Glove thickness	:	0,38 mm
Material	:	Nitrile rubber
Break through time	:	> 10 min
Glove thickness	:	0,1 mm
Remarks	:	Avoid skin contact. Use chemically resistant gloves. The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it. Be aware that in daily use the durability of a chemical resistant protective glove can be notably shorter than the break through time measured according to EN 374, due to the numerous outside influences (e.g. temperature). Please observe the instructions regarding permeability and break-through time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other.
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. Personal protection through wearing a tightly closed chemical protection suit and a self-contained breathing apparatus.
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.

Protective 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

9.1 Information on basic physical and chemical properties

Physical state	:	liquid
Colour	:	colorless
Odour	:	conforms to standard
Odour Threshold	:	not determined
Melting point	:	not determined
Boiling point	:	not determined
Flammability	:	not determined
Upper explosion limit / Upper flammability limit	:	not determined
Lower explosion limit / Lower flammability limit	:	not determined
Flash point	:	104,00 °C Method: closed cup
Auto-ignition temperature	:	not determined
Decomposition temperature	:	not determined
pH	:	not determined
Viscosity, dynamic	:	not determined

Viscosity, kinematic	:	not determined
Water solubility	:	not determined
Solubility in other solvents	:	not determined
Partition coefficient: n-octanol/water	:	not determined
Vapour pressure	:	0,12 hPa (20 °C) Calculated
Relative density	:	not determined
Density	:	not determined

9.2 Other information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No hazards to be specially mentioned.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions	:	Presents no significant reactivity hazard, by itself or in contact with water.

10.4 Conditions to avoid

Conditions to avoid	:	Direct sources of heat.

10.5 Incompatible materials

Materials to avoid	:	Avoid contact with strong acids, alkali or oxidizing agents.

10.6 Hazardous decomposition products

Carbon monoxide and unidentified organic compounds may be formed during combustion.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Not classified due to lack of data.

Product:

Acute oral toxicity	:	Acute toxicity estimate: > 2.000 mg/kg Method: Calculation method
Acute dermal toxicity	:	Acute toxicity estimate: > 2.000 mg/kg Method: Calculation method

Skin corrosion/irritation

Not classified due to lack of data.

Components:

2,6-dimethyloct-7-en-2-ol:

Species	:	Rabbit
Exposure time	:	4 h
Assessment	:	Causes skin irritation.
Method	:	Read across
Result	:	irritating
GLP	:	yes
Remarks	:	REACH data

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

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

(2E)-2-ethyl-4-(2,2,3-trimethylcyclopent-3-en-1-yl)but-2-en-1-ol:

Species	:	Rabbit
Exposure time	:	4 h
Method	:	OECD Test Guideline 404
Result	:	No skin irritation
GLP	:	yes
Remarks	:	REACH data

Serious eye damage/eye irritation

Causes serious eye irritation.

Components:

octahydro-2H-1-benzopyran-2-one:

Species	:	Rabbit
Assessment	:	Causes serious eye damage.
Method	:	OECD Test Guideline 405
Result	:	Severe eye irritation
Remarks	:	REACH data

2,6-dimethyloct-7-en-2-ol:

Species	:	Rabbit
Assessment	:	Causes serious eye irritation.
Method	:	Draize Test
Result	:	Moderate eye irritation
GLP	:	yes

Test substance	:	(undiluted)
Remarks	:	REACH data

(2E)-2-ethyl-4-(2,2,3-trimethylcyclopent-3-en-1-yl)but-2-en-1-ol:

Species	:	Rabbit
Exposure time	:	15 min
Method	:	OECD Test Guideline 405
Result	:	Eye irritation
GLP	:	yes
Remarks	:	REACH data

Respiratory or skin sensitisation

Skin sensitisation

May cause an allergic skin reaction.

Respiratory sensitisation

Not classified due to lack of data.

Components:

2,6-dimethyloct-7-en-2-ol:

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

Species	:	Guinea pig
Assessment	:	Does not cause skin sensitisation.
Method	:	OECD Test Guideline 406
Result	:	Not a skin sensitizer.
GLP	:	yes

Test substance	:	5.0%
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

(2E)-2-ethyl-4-(2,2,3-trimethylcyclopent-3-en-1-yl)but-2-en-1-ol:

Test Type	:	maximisation study
Species	:	human
Result	:	Did not cause sensitisation on laboratory animals.
Test substance	:	5%

Germ cell mutagenicity

Not classified due to lack of data.

Components:

cis-2-tert-butylcyclohexyl acetate:

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: 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: Based on data from similar materials
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: Based on data from similar materials
REACH data

2,6-dimethyloct-7-en-2-ol:

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

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: Human lymphocytes
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
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)
Application Route: Dermal
Method: OECD Test Guideline 474
Result: negative
GLP: yes

Carcinogenicity

Not classified due to lack of data.

Components:

cis-2-tert-butylcyclohexyl acetate:

Species	:	Rat
Application Route	:	Oral
Remarks	:	not required

Reproductive toxicity

Not classified due to lack of data.

Components:

cis-2-tert-butylcyclohexyl acetate:

Effects on fertility : Test Type: reproductive and developmental toxicity study
Species: Rat, male and female
Strain: wistar
Application Route: Ingestion
General Toxicity - Parent: NOAEL: >= 437 mg/kg body weight
Fertility: NOAEL: >= 437 mg/kg body weight
Method: OECD Test Guideline 422
GLP: yes
Remarks: REACH data

Effects on foetal development : Test Type: Pre-natal
Species: Rat, female
Strain: wistar
Application Route: Ingestion
Duration of Single Treatment: 22 d
Frequency of Treatment: 1 daily
General Toxicity Maternal: NOAEL: >= 444 mg/kg body weight
Developmental Toxicity: NOAEL: >= 444 mg/kg body weight
Method: OECD Test Guideline 414
GLP: yes
Remarks: REACH data

2,6-dimethyloct-7-en-2-ol:

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rat, female
Strain: Sprague-Dawley
Application Route: Oral
General Toxicity Maternal: NOAEL: 1.000 mg/kg body weight
Developmental Toxicity: NOAEL: 1.000 mg/kg body weight
Method: Study for effects on embryo-fetal development
Result: Not classified
GLP: yes
Remarks: Read across
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
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

STOT - single exposure

Not classified due to lack of data.

STOT - repeated exposure

Not classified due to lack of data.

Repeated dose toxicity

Components:

cis-2-tert-butylcyclohexyl acetate:

Species	:	Rat, female
NOAEL	:	>= 423 mg/kg
Application Route	:	Ingestion

Exposure time	:	90 d
Number of exposures	:	1x /day
Method	:	OECD Test Guideline 408
GLP	:	yes
Target Organs	:	Kidney
Remarks	:	REACH data

Species	:	Rat, male
LOAEL	:	37 mg/kg
Application Route	:	Ingestion
Exposure time	:	90 d
Number of exposures	:	1x /day
Method	:	OECD Test Guideline 408
GLP	:	yes
Target Organs	:	Kidney
Remarks	:	REACH data

Species	:	Rat, male
NOAEL	:	>= 505 mg/kg
Application Route	:	Ingestion
Method	:	OECD Test Guideline 422
GLP	:	yes
Target Organs	:	Kidney
Remarks	:	REACH data

Species	:	Rat, female
NOAEL	:	>= 437 mg/kg
Application Route	:	Ingestion
Method	:	OECD Test Guideline 422
GLP	:	yes
Target Organs	:	Kidney
Remarks	:	REACH data

2,6-dimethyloct-7-en-2-ol:

Species	:	Rat, male and female
NOAEL	:	500 mg/kg
NOAEL	:	500 mg/kg
Application Route	:	Oral
Number of exposures	:	1x /day
Method	:	Read across
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
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

Aspiration toxicity

Not classified due to lack of data.

11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment	:	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 12: Ecological information

12.1 Toxicity

Components:

decahydro heptamethyl indenofuran:

Toxicity to fish	:	LC50 (Fish): > 0,055 mg/l Exposure time: 96 h Remarks: REACH data

NOEC (Fish): 0,055 mg/l
Exposure time: 96 h
Remarks: REACH data

LC50 (Fish): > 0,055 mg/l
Exposure time: 48 h
Remarks: REACH data

Toxicity to daphnia and other aquatic invertebrates : EC50 : > 0,099 mg/l
Exposure time: 48 h
Remarks: REACH data

NOEC : 0,099 mg/l
Exposure time: 48 h
Remarks: REACH data

Toxicity to algae/aquatic plants : NOEC (algae): 0,093 mg/l
Exposure time: 72 h
Remarks: REACH data

EC50 (algae): > 0,093 mg/l
Exposure time: 72 h
Remarks: REACH data

M-Factor (Acute aquatic toxicity) : 1

Toxicity to microorganisms : IC50 : > 1.000 mg/l
Exposure time: 3 h
Remarks: REACH data

NOEC : 1.000 mg/l
Exposure time: 3 h
Remarks: REACH data

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: > 0,0341 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Test Type: semi-static test
Analytical monitoring: yes
Method: OECD Test Guideline 211
GLP: yes
Remarks: REACH data

M-Factor (Chronic aquatic toxicity) : 1

Ecotoxicology Assessment

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

12.2 Persistence and degradability

Components:

cis-2-tert-butylcyclohexyl acetate:

Biodegradability : Test Type: aerobic
Inoculum: activated sludge
Concentration: 100 mg/l
Result: Not readily biodegradable.
Biodegradation: 43 %
Exposure time: 28 d
Method: OECD Test Guideline 301F
GLP: yes
Remarks: REACH data

Test Type: aerobic
Inoculum: activated sludge
Concentration: 100 mg/l
Result: Not readily biodegradable.
Biodegradation: 62 %
Exposure time: 61 d
Method: OECD Test Guideline 301F
GLP: yes
Remarks: REACH data

2,6-dimethyloct-7-en-2-ol:

Biodegradability : Test Type: aerobic
Inoculum: activated sludge, non-adapted
Concentration: 10 mg/l
Result: Readily biodegradable.
Biodegradation: 72 %
Exposure time: 28 d
Method: OECD 301 B
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:

Biodegradability : Test Type: aerobic
Inoculum: activated sludge, non-adapted
Concentration: 18,8 mg/l
Result: Readily biodegradable.
Biodegradation: 96,3 %
Exposure time: 28 d
Method: OECD Test Guideline 301F
GLP: yes
Remarks: REACH data

12.3 Bioaccumulative potential

Components:

cis-2-tert-butylcyclohexyl acetate:

Bioaccumulation : Species: Oncorhynchus mykiss (rainbow trout)
Exposure time: 33 d
Bioconcentration factor (BCF): 156
Method: OECD Test Guideline 305
GLP: yes

2,6-dimethyloct-7-en-2-ol:

Bioaccumulation : Bioconcentration factor (BCF): 64,8
Method: see user defined free text
Remarks: The value is given based on a SAR/AAR approach using OECD Toolbox, DEREK, VEGA QSAR models (CAESAR models), etc.
Bioaccumulation is unlikely.
REACH data

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

Bioaccumulation : Species: Lepomis macrochirus (Bluegill sunfish)
Exposure time: 21 d
Bioconcentration factor (BCF): 391
Method: OECD Test Guideline 305
GLP: yes
Remarks: REACH data

12.4 Mobility in soil

Product:

Mobility : Remarks: No data available

Components:

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

Distribution among environmental compartments : Adsorption/Soil
Koc: 12598, log Koc: 4,1

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

Product:

Additional ecological information : There is no data available for this product.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Dispose of according to local regulations. Avoid disposing into drainage systems and into the environment.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14: Transport information

14.1 UN number or ID number

Not regulated as a dangerous good

14.2 UN proper shipping name

Not regulated as a dangerous good

14.3 Transport hazard class(es)

Not regulated as a dangerous good

14.4 Packing group

Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

Remarks : Not classified as dangerous in the meaning of transport regulations.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) : Conditions of restriction for the following entries should be considered: Number on list 75, 3

tetrahydro-2-isobutyl-4-methylpyran-

4-ol, mixed isomers (cis and trans)
vanillin
(+/-) trans-3,3-dimethyl-5-(2,2,3-trimethyl-cyclopent-3-en-1-yl)pent-4-en-2-ol
coumarin
eugenol
(R)-p-mentha-1,8-diene
(1R,3S,7R,8R,10R,13R)-5,5,7,9,9,13-hexamethyl-4,6-dioxatetracyclo[6.5.1.01,10.03,7]tetradecane
cinnamonitrile
citronellol
(-)-pin-2(10)-ene
geraniol
citral
p-mentha-1,3-diene

Regulation (EU) 2019/1148 on the marketing and use of explosives precursors	:	acetone
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).	:	Not applicable
Regulation (EC) No 1005/2009 on substances that deplete the ozone layer	:	Not applicable
Regulation (EU) 2019/1021 on persistent organic pollutants (recast)	:	Not applicable
REACH - List of substances subject to authorisation (Annex XIV)	:	Not applicable

Regulation (EU) 2019/1148 on the marketing and use of explosives precursors

acetone (ANNEX II)

15.2 Chemical safety assessment

A Chemical Safety Assessment is not required for this substance.

SECTION 16: Other information

Full text of H-Statements

H226	:	Flammable liquid and vapour.
H301	:	Toxic if swallowed.
H302	:	Harmful if swallowed.
H311	:	Toxic in contact with skin.
H315	:	Causes skin irritation.
H317	:	May cause an allergic skin reaction.

H318	:	Causes serious eye damage.
H319	:	Causes serious eye irritation.
H336	:	May cause drowsiness or dizziness.
H400	:	Very toxic to aquatic life.
H410	:	Very toxic to aquatic life with long lasting effects.
H411	:	Toxic to aquatic life with long lasting effects.
H412	:	Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox.	:	Acute toxicity
Aquatic Acute	:	Short-term (acute) aquatic hazard
Aquatic Chronic	:	Long-term (chronic) aquatic hazard
Eye Dam.	:	Serious eye damage
Eye Irrit.	:	Eye irritation
Flam. Liq.	:	Flammable liquids
Skin Irrit.	:	Skin irritation
Skin Sens.	:	Skin sensitisation
STOT SE	:	Specific target organ toxicity - single exposure

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; 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; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; 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 Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; 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; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization 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; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Other information : 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].
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 >= 1.0% due to an intentional addition by IFF, the chemical(s) will be identified in this safety data sheet.

According to Regulation (EC) No. 1907/2006 the information in this safety data sheet is based on the properties of the material known to IFF at the time the data sheet was issued. The safety data sheet is intended to provide information for a health and safety assessment of the material and the circumstances, under which it is packaged, stored or applied in the workplace. For such a safety assessment International Flavors & Fragrances holds no responsibility. This document is not intended for quality assurance purposes.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

REG_EU / EN