

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

VERTOFIX COEUR SALES



Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	25.01.2021	R00000495741	Date of first issue: 25.01.2021

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

1.1 Product identifier

Trade name	:	VERTOFIX COEUR SALES
Registration number	:	01-2119969651-28-0002
IFF Code	:	00220700
Cust. Material	:	129140
Substance name	:	[3R-(3 α ,3 α ,7,8 α)]-1-(2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-5-yl)ethan-1-one
EC-No.	:	251-020-3,
CAS-No.	:	32388-55-9

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

Use of the Substance/Mixture	:	Ingredient used in Flavour and/or Fragrance preparations
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1.3 Details of the supplier of the safety data sheet

Company	:	INTERNATIONAL FLAVORS & FRAGRANCES IFF (CHINA) LIMITED GUANGZHOU ECONOMIC & TECHNOLOGICAL 510730 GUANGZHOU
Telephone	:	+862082219838
Telefax	:	+862082219828
E-mail address of person responsible for the SDS	:	sds@iff.com

1.4 Emergency telephone number

+44 0845 46 47 (ENGLAND & WALES); +44 08454 24 24 24 (SCOTLAND)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Skin sensitisation, Sub-category 1B	H317: May cause an allergic skin reaction.
Short-term (acute) aquatic hazard, Category 1	H400: Very toxic to aquatic life.
Long-term (chronic) aquatic hazard, Category 1	H410: Very toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal word : Warning

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Hazard statements : H317 May cause an allergic skin reaction.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P273 Avoid release to the environment.
P280 Wear protective gloves.
Response:
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.
P391 Collect spillage.

Hazardous components which must be listed on the label:

32388-55-9 cedr-8-enyl methyl ketone

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.

SECTION 3: Composition/information on ingredients

3.1 Substances

Substance name : [3R-(3 α ,3 α ,7,8 $\alpha\alpha$)]-1-(2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-5-yl)ethan-1-one
Molecular weight : 246,20 g/mol
REACH No. : 01-2119969651-28-0002

Components

Chemical name	CAS-No. EC-No. Index-No.	Concentration (% w/w)
[3R-(3 α ,3 α ,7,8 $\alpha\alpha$)]-1-(2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-5-yl)ethan-1-one	32388-55-9 251-020-3	>= 90 - <= 100

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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.

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

- 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

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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.

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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Contains no substances with occupational exposure limit values.

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

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 breakthrough 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.

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

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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

Appearance	: liquid
Colour	: yellowish brown
Odour	: conforms to standard
pH	: not determined
Melting point	: not determined
Boiling point	: not determined
Flash point	: 100,00 °C Method: closed cup
Flammability (solid, gas)	: not determined
Upper explosion limit / Upper flammability limit	: not determined
Lower explosion limit / Lower flammability limit	: not determined
Vapour pressure	: < 0,01 hPa
Relative vapour density	: not determined
Relative density	: 0,9970 - 1,0070
Density	: not determined
Water solubility	: not determined

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Solubility in other solvents : not determined
Partition coefficient: n-octanol/water : log Pow: 5,655

Decomposition temperature : not determined
Viscosity, dynamic : not determined
Viscosity, kinematic : not determined
Oxidizing properties : 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. Avoid contact with strong acids, alkali or oxidizing agents.

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 toxicological effects

Acute toxicity

Not classified based on available information.

Product:

[3R-(3 α ,3 α ,7,8 $\alpha\alpha$)]-1-(2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-5-yl)ethan-1-one:

Acute oral toxicity : LD50 (Rat): 4.500 mg/kg
Remarks: IFF

Acute dermal toxicity : LD50 (Rabbit): > 5.000 mg/kg

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Skin corrosion/irritation

Not classified based on available information.

Product

[3R-(3 α ,3 α ,7,8 $\alpha\alpha$)]-1-(2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-5-yl)ethan-1-one:

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

Serious eye damage/eye irritation

Not classified based on available information.

Respiratory or skin sensitisation

Skin sensitisation

May cause an allergic skin reaction.

Respiratory sensitisation

Not classified based on available information.

Product:

[3R-(3 α ,3 α ,7,8 $\alpha\alpha$)]-1-(2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-5-yl)ethan-1-one:

Test Type : maximisation study
Species : human
Result : Did not cause sensitisation on laboratory animals.
Test substance : 30% in petrolatum

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

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SECTION 12: Ecological information

12.1 Toxicity

Components:

[3R-(3 α ,3 α ,7,8 $\alpha\alpha$)]-1-(2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-5-yl)ethan-1-one:

M-Factor (Acute aquatic toxicity) : 1

12.2 Persistence and degradability

Components:

[3R-(3 α ,3 α ,7,8 $\alpha\alpha$)]-1-(2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-5-yl)ethan-1-one:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 36 %
Method: Directive 67/548/EEC Annex V, C.4.C.

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

Product:

Mobility : Remarks: No data available

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 Other adverse effects

Product:

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

SECTION 13: Disposal considerations

13.1 Waste treatment methods

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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

ADR	:	UN 3082
IMDG	:	UN 3082
IATA	:	UN 3082

14.2 UN proper shipping name

ADR	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CEDR-8-ENYL METHYL KETONE)
IMDG	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CEDR-8-ENYL METHYL KETONE)
IATA	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CEDR-8-ENYL METHYL KETONE)

14.3 Transport hazard class(es)

ADR	:	9
IMDG	:	9
IATA	:	9

14.4 Packing group

ADR	
Packing group	: III
Classification Code	: M6
Hazard Identification Number	: 90
Labels	: 9
Tunnel restriction code	: (-)
IMDG	
Packing group	: III
Labels	: 9
EmS Code	: F-A, S-F
IATA (Cargo)	
Packing instruction (cargo aircraft)	: 964
Packing instruction (LQ)	: Y964

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Packing group : III
Labels : Class 9 - Miscellaneous dangerous substances and articles

IATA_P (Passenger)

Packing instruction : 964
(passenger aircraft)
Packing instruction (LQ) : Y964
Packing group : III
Labels : Class 9 - Miscellaneous dangerous substances and articles

14.5 Environmental hazards

ADR

Environmentally hazardous : yes

IMDG

Marine pollutant : yes (CEDR-8-ENYL METHYL KETONE)

IATA (Passenger)

Environmentally hazardous : yes

IATA (Cargo)

Environmentally hazardous : yes

14.6 Special precautions for user

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.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

Other regulations:

Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

15.2 Chemical safety assessment

A Chemical Safety Assessment is not required for this substance.

SECTION 16: Other information

Full text of other abbreviations

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ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; 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; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further 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 $\geq 1.0\%$ 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

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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.

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