



# SAFETY DATA SHEET

## INTERNATIONAL FLAVORS & FRAGRANCES

Product CYCLABUTE

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### ***1. Identification of the substance/mixture and of the company/undertaking***

#### **1.1 Product identifier**

Trade name : CYCLABUTE

#### **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

#### **1.3 Details of the supplier of the safety data sheet**

Company : IFF (GREAT BRITAIN) LTD.  
DUDDERY HILL  
CB9 8LG HAVERHILL

Telephone : +441440715000

Telefax : +441440762199

E-mail address : sds@iff.com

Responsible/issuing person

#### **1.4 Emergency telephone number**

+44 1440 7 15000

### ***2. Hazards identification***

#### **2.1 Classification of the substance or mixture**

**Classification (REGULATION (EC) No 1272/2008)**

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

**Classification (67/548/EEC, 1999/45/EC)**

In accordance with EC directives or respective national laws, the product does not need to be classified nor labelled.

#### **2.2 Label elements**

**Labelling (REGULATION (EC) No 1272/2008)**

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

#### **2.3 Other hazards**

None reasonably foreseeable.

### ***3. Composition/information on ingredients***

#### **3.1 Substances**

Chemical name of the substance : 3a,4,5,6,7,7a-hexahydro-4,7-methano-1H-inden-5-yl isobutyrate,

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Chemical characterization : 3a,4,5,6,7,7a-hexahydro-4,7-methano-1H-inden-6-yl isobutyrate  
: esters of aliphatic acids  
Molecular Weight : 220 g/mol  
CAS-No. : 67634-20-2, 68039-39-4  
EINECS-No. : 266-825-5, 268-255-2

Remarks :  
For the full text of the R-phrases mentioned in this Section, see Section 16.

### 3.2 Mixtures

Not applicable, product is a substance.

## 4. First aid measures

### 4.1 Description of first aid measures

General advice : Take Risk and Safety phrases (section 15) 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.

### 4.2 Most important symptoms and effects, both acute and delayed

Symptoms : No information available.

Risks : No information available.

### 4.3 Indication of any immediate medical attention and special treatment needed

Treatment : No information available.

## 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.

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### 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.

## 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.

### 6.2 Environmental precautions

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

### 6.3 Methods and materials 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

Prevent spreading over a wide area (e.g. by containment or oil barriers).

## 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.

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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 uses

Specific use(s) : No information available.

## 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

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

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to reduce airborne concentrations below an established occupational exposure limit.

- Hand protection : 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.
- 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.

### Environmental exposure controls

General advice : Keep away from drains, surface- and groundwater and soil.

## 9. Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Appearance	: liquid
Colour	: colorless
Odour	: conforms to standard
Odour Threshold	: not determined
Flash point	: 94 °C
Lower explosion limit	: not determined
Upper explosion limit	: not determined
Flammability (solid, gas)	: not determined
Oxidizing properties	: not determined
Autoignition temperature	: not determined
pH	: not determined
Melting point	: not determined
Boiling point	: not determined
Vapour pressure	: not determined
Density	: not determined
Water solubility	: not determined
Partition coefficient: n-octanol/water	: log Pow: 4,100
Solubility in other solvents	: not determined

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Viscosity, dynamic : not determined  
Viscosity, kinematic : not determined  
Relative vapour density : not determined  
Evaporation rate : not determined

### 9.2 Other information

Refractive index : not determined  
Relative density : 1,0270 - 1,0310

## 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 : Note: 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

Hazardous decomposition products : Carbon monoxide and unidentified organic compounds may be formed during combustion.

## 11. Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

#### Skin corrosion/irritation

Skin irritation : No information available.  
Skin irritation : Species: human  
Result: Skin irritation  
Method: repeated insult patch test

#### Serious eye damage/eye irritation

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No information available.

Eye irritation : Species: rabbit  
Result: Mild eye irritation

### Respiratory or skin sensitization

No information available.

Sensitisation : Species: human  
Result: Did not cause sensitization on laboratory animals.  
Test substance: 5%

### Germ cell mutagenicity

No information available.

### Carcinogenicity

No information available.

### Reproductive toxicity

No information available.

### Target Organ Systemic Toxicant - Single exposure

No information available.

### Target Organ Systemic Toxicant - Repeated exposure

No information available.

### Aspiration hazard

No information available.

## 12. Ecological information

### 12.1 Toxicity

### 12.2 Persistence and degradability

No information available.

### 12.3 Bioaccumulative potential

No information available.

### 12.4 Mobility in soil

### 12.5 Results of PBT and vPvB assessment

### 12.6 Other adverse effects

No information available.

## 13. Disposal considerations

### 13.1 Waste treatment methods

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

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

### 14. Transport information

#### ADR

Not dangerous goods

Environmentally hazardous : no

#### IATA

Not dangerous goods

#### IMDG

Not dangerous goods

Special precautions for user : No special precautions required.

### 15. Regulatory information

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

##### Labelling — EU Directives 67/548/EEC or 1999/45/EC—

Additional Info : In accordance with EC directives or respective national laws, the product does not need to be classified nor labelled.

Water contaminating class : WGK 3 highly water endangering  
(Germany)

#### 15.2 Chemical Safety Assessment

A Chemical Safety Assessment has not been carried out for this product.

### 16. Other information

#### Full text of R-phrases referred to under sections 2 and 3

#### Full text of H-Statements referred to under sections 2 and 3.

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.

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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 a safety assessment International Flavors & Fragrances holds no responsibility. This document is not intended for quality assurance purposes.

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