

GAMMA UNDECALACTONE(ALDEHYDE C14)

Safety Data Sheet

According to Regulation (EU) 2015/830 (REACH Annex II)

Date of issue: 6/05/2019

Revision date: 6/05/2019

Version: 1.0

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

1.1. Product identifier

Product name	: GAMMA UNDECALACTONE(ALDEHYDE C14)
Product form	: Substance
Substance name	: 2(3H)-Furanone, 5-heptyldihydro-
EC-No.	: 203-225-4
CAS-No.	: 104-67-6
Formula	: C11H20O2
Synonyms	: .gamma.-Heptyl-.gamma.-butyrolactone / 4-Hydroxyundecanoic acid lactone / .gamma.-Undecalactone / Undecalactone, .gamma.- / Undecan-4-olide / 1,4-Undecanolide / 4-Undecanolide / Undecano-1,4-lactone / Undecanoic acid, 4-hydroxy-, .gamma.-lactone / GAMMA-UNDECALACTONE / Peach aldehyde / Undecalactone / 5-Heptyloxolan-2-one / 5-Heptyldihydro-2(3H)-furanone

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

1.2.1. Relevant identified uses

Main use category	: Fragrance Usage: It can be widely used in the essence for the industrial products. It's also applicable to the odor types of osmanthus, reseda, jasmine, gardenia etc.
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1.2.2. Uses advised against

Restrictions on use	: No information available
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1.3. Details of the supplier of the safety data sheet

Supplier	: ANHUI HYE AROMAS CO., LTD
Address	: PENG LING INDUSTRIAL AREA, QIAN SHAN CONTY, ANHUI PROVINCE, CHINA
Zip Code	: 246300
Tel	: +86-556-8968843
FAX	: +86-556-8977997
E-mail	: ligainian@anhuihuaye.com

Importer	:
Address	:
Zip Code	:
Tel	:
Fax	:
E-mail	:

1.4. Emergency telephone number

+86-556-8968843

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Hazardous to the aquatic environment — Chronic Hazard, Category 2 H412

Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

Toxic to aquatic life with long lasting effects

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)	: No hazard pictograms
Signal word (CLP)	: No signal word
Hazard statements (CLP)	: H412 - Harmful to aquatic life with long lasting effects.
Precautionary statements (CLP)	: P273 - Avoid release to the environment. P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

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2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
2(3H)-Furanone, 5-heptyldihydro-	(CAS-No.) 104-67-6 (EC-No.) 203-225-4	> 98.5	Aquatic Chronic 2, H412

Full text of H-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: If you feel unwell, seek medical advice (show directions for use or safety data sheet if possible).
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing; Give oxygen or artificial respiration if necessary; If you feel unwell, seek medical advice
First-aid measures after skin contact	: Wash skin with plenty of water and take off contaminated clothing; Take off immediately all contaminated clothing. Call a physician immediately. If skin irritation or rash occurs: Get medical advice/attention; Wash contaminated clothing before reuse
First-aid measures after eye contact	: Rinse cautiously with water for several minutes while holding the eyelids wide open; Remove contact lenses, if present and easy to do. Continue rinsing If eye irritation persists: Get medical advice/attention
First-aid measures after ingestion	: Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

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

Potential Acute Health Effects: No known significant effects or critical hazards.

Over-exposure signs /symptoms: No specific data.

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

Notes to Physician: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments: no specific treatments

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	: No information available.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire	: In a fire or if heated, a pressure increase will occur and the container may burst. Decomposition products may include the following materials: carbon dioxide, carbon monoxide.
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5.3. Advice for firefighters

Precautionary measures fire	: Eliminate every possible source of ignition. Keep container tightly closed and away from heat, sparks and flame.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

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Other information	: Ensure adequate ventilation, especially in confined areas. Evacuate personnel to a safe area. Avoid contact with skin, eyes and inhalation of vapors. Move containers from fire area if it can be done without personal risk. Cool tanks/drums with water spray/remove them into safety. Stay upwind.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures	: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
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6.1.2. For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures	: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2. Environmental precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	: mall spill: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor. Large spill: Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Note: see section 1 for emergency contact information and section 13 for waste disposal.
Other information	: Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Use personal protective equipment as required (See Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Hygiene measures	: Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	: Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.
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7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station. Remove all sources of ignition. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

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Hand protection:

Hand protection: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. >8 hours (breakthrough time): disposable vinyl.

Body protection: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: lab coat, overall.

Other skin protection: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: neoprene.

Eye protection:

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. Recommended: splash goggles, safety glasses with side-shields

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Colourless to pale yellow liquid
Odour	: Strong peach odour
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: Not applicable
Freezing point	: -9.5 °C at 101.3 kPa
Boiling point	: 297 °C
Flash point	: > 110 °C
Auto-ignition temperature	: > 256 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: 0.27 Pa at 25 °C
Vapour density (Air=1)	: 2.2
Relative vapour density at 20 °C	: No data available
Density	: 0.942~0.945 g/cm3
Solubility	: Insoluble in water, soluble in organic solvent, e.g. alcoholetc.
Log Pow	: 3.6 at 25 °C
Viscosity, kinematic	: No data available
Viscosity, dynamic	: <10 mPa.s at 20°C
Explosive properties	: No explosive properties.
Oxidising properties	: No oxidising properties.
Explosive limits	: No explosive properties.

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

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

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

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10.4. Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.

10.5. Incompatible materials

Strong acid, strong alkali, strong oxidizing materials.

10.6. Hazardous decomposition products

Carbon monoxide, irritating or toxic fumes and gases, carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

2(3H)-Furanone, 5-heptyldihydro- (104-67-6)

LD50 oral rat	18500 mg/kg
LD50 dermal rabbit	> 2000 mg/kg

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Acute aquatic toxicity	: Not classified
Chronic aquatic toxicity	: Harmful to aquatic life with long lasting effects.

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

Koc: 709.2 (Kow method)
log Koc: 2.85 (Kow method)
Koc: 398.5 (MCI method)
log Koc: 2.6 (MCI method)
The substance has a low potential for adsorption

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations	: Dispose of contents/container in accordance with licensed collector's sorting instructions.

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SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.2. UN proper shipping name				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental hazards				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available				

14.6. Special precautions for user

Overland transport

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

Inland waterway transport

Not regulated

Rail transport

Not regulated

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

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

2(3H)-Furanone, 5-heptyldihydro- is not on the REACH Candidate List

2(3H)-Furanone, 5-heptyldihydro- is not on the REACH Annex XIV List

2(3H)-Furanone, 5-heptyldihydro- is not subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

2(3H)-Furanone, 5-heptyldihydro- is not subject to Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC

15.1.2. National regulations

Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on the Canadian DSL (Domestic Substances List)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

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

Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

Listed on the Japanese ISHL (Industrial Safety and Health Law)

Listed on the Korean ECL (Existing Chemicals List)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

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

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Listed on the TCSI (Taiwan Chemical Substance Inventory)

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Germany

Reference to AwSV : Water hazard class (WGK) 1, Slightly hazardous to water (Classification according to AwSV; ID No. 2857)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

SZW-lijst van kankerverwekkende stoffen : 2(3H)-Furanone, 5-heptyldihydro- is listed

SZW-lijst van mutagene stoffen : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : The substance is not listed

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Issue date : 5-June-2019

Revision date : 5-June-2019

Full text of H- and EUH-statements:

Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
H412	Harmful to aquatic life with long lasting effects.

Key or legend to abbreviations and acronyms used in the safety data sheet

ADR : European Agreement Concerning the International Carriage of Dangerous Goods by Road

IMDG : International Maritime Dangerous Goods

IATA : International Air Transport Association

ADN : European Agreement Concerning the International Carriage of Dangerous Goods by Inland Waterway

RID : Regulations Concerning the International Carriage of Dangerous Goods by Rail

PBT : Persistent, Bioaccumulative and Toxic

vPvB : Very Persistent and Very Bioaccumulative

DNEL : Derived No Effect Level

PNEC : Predicted No Effect Concentration

LC50 : Lethal Concentration 50

LD50 : Lethal Dose 50

EC50 : Effective Concentration 50

TWA : Time Weighted Average

STEL : Short Term Exposure Limit

Key literature references and sources for data

ECHA: <http://echa.europa.eu/>

IFA GESTIS: [http://gestis-en.itrust.de/nxt/gateway.dll?f=templates\\$fn=default.htm\\$vid=gestiseng:sdbeng](http://gestis-en.itrust.de/nxt/gateway.dll?f=templates$fn=default.htm$vid=gestiseng:sdbeng)

HSDB: <http://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>

ICSC: <http://www.ilo.org/dyn/icsc/showcard.home>

eChemPortal: http://www.echemportal.org/echemportal/index?pagelD=0&request_locale=en

NITE-CHIRP: http://www.nite.go.jp/en/chem/chrip/chrip_search/srhInput

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This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product