

HEALTH	2
FLAMMABILITY	1
REACTIVITY	0

Section 1: PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product Name	Gamma Undecalactone (Aldehyde C-14), Natural
Product Number	0309100
CAS-No.	104-67-6

1.2 Product Recommended Use

Flavorings

1.3 Preparation Information

Company	Aurochemicals 7 Nicoll Street Washingtonville, NY 10992
Telephone	845-496-6065
Fax	845-496-6248

1.4 Emergency Telephone Number

1-800-535-5053
International - 1-352-323-3500 collect

Section 2: HAZARD(s) IDENTIFICATION

2.1 Classification of substance or mixture

GHS Classification in accordance with 29
CFR 1910 (OSHA HCS)

Skin irritation (Category 2), H315
Eye irritation (Category 2A) H319
Specific target organ toxicity (Category 3) H335
Acute Aquatic toxicity (Category 3), H402
Chronic aquatic toxicity (Category 3) H412

2.2 GHS Label Elements, Including precautionary statements

Pictogram



Signal Statement

Warning

Hazard Statement(s)

H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H412	Harmful to aquatic life with long lasting effects

Precautionary Statement(s)

P261	Avoid breathing dust/fume/gas/mist/vapors/spray
P264	Wash skin thoroughly after handling
P271	Use only outdoors or in a well-ventilated area
P273	Avoid release to the environment
P280	Wear protective gloves/eye protection/face protection

P302+P352	IF ON SKIN: Wash with plenty of soap and water
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P332+P313	If skin irritation occurs: Get medical advice/attention
P337+P313	If eye irritation persists; get medical advice/attention
P362	Take off contaminated clothing and wash before reuse
P403+P233	Store in a well ventilated place. Keep container tightly closed
P405	Store locked up
P501	Dispose of contents/container to an approved waste disposal

2.3 HNOC (Hazards not otherwise classified or not covered by GHS -None)

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances

Synonyms	Undecanoic γ -lactone Aldehyde C-14
Formula	$C_{11}H_{20}O_2$
Molecular Weight	184.28 g/mol
CAS-No	104-67-6
EC-No.	203-225-4

Hazardous Components

Component	Classification	Concentration
Undecan-4-olide	Skin irritation (2) H315 Eye irritation (2A) H319 STOT SE (3) H335 Aquatic Acute (3) H402 Aquatic Chronic (3) H412	

Section 4: FIRST AID MEASURES

4.1 Description of first aid measures

General advice	Consult physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
Inhalation	Provide fresh air; keep at rest and at a comfortable position to breathe. Consult a physician.
Contact with skin:	Remove contaminated clothing. Rinse skin with cool water then wash with mild soap and warm water and contact a physician.
Contact with eyes:	Rinse thoroughly with plenty of water for at least 15 as a precaution and consult a physician.
Ingestion	DO NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
Clothing contamination:	Remove contaminated clothing and wash before reuse.

4.2 Most important symptoms and effects both acute and delayed

See section 2.2 and or section 11

- 4.3 **Indication of any immediate medical attention and special treatment needed.** No data available

Section 5: FIREFIGHTING MEASURES

- 5.1 **Extinguishing Media**
Suitable Extinguishing Media Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide
- 5.2 **Special hazards arising from the substance or mixture** Carbon oxides
- 5.3 **Advice for fire fighters** Wear self contained breathing apparatus for firefighting if necessary. Emits toxic fumes under fire conditions
- 5.4 **Further information** Use water spray to cool unopened containers.

Section 6: ACCIDENTAL RELEASE MEASURES

- 6.1 **Personal precautions, protective equipment and emergency procedures** Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe area.
- 6.2 **Environment precautions** Prevent further leakage or spillage if safe to do so. Do not allow to enter drains or sewage system.
- 6.3 **Methods and materials for containment and clean up** Contain spillage. Soak up with absorbent material. Sweep up with broom and shovel. Place in a suitable, closed container for disposal.
- 6.4 **Specific end use(s)** Apart from the uses mentioned in section 1.2, no other specific uses are stipulated.

Section 7: HANDLING AND STORAGE

- 7.1 **Precautions for safe handling** Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.
- 7.2 **Conditions for Safe storage** Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.
- 7.3 **Specific End use(s)** Flavorings

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

- 8.1 **Control parameters**
Components contain no substance with workplace control parameters
- 8.2 **Exposure Controls**
Appropriate Engineering Controls Handle in accordance with good industrial hygiene and safety practices. Wash hands before breaks and at the end of the day.
- Personal protective equipment**
These recommendations are advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. They should not be construed as offering an approval for any specific use scenario.
- Eye/face protection Wear appropriate safety glasses with side shields and face shield. NIOSH tested and approved.
- Skin protection Wear chemically resistant, rubber gloves. Use proper glove removal techniques (without touching gloves outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use. Wash and dry hands.

Body protection	Impervious clothing protecting against chemicals, should be selected specifically for the work place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.
Respiratory protection	Where risk assessment shows air-purifying respirators are appropriate use a full face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a back up to engineering controls. If the respirator is the sole means of protection, use a full face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Control of environmental exposure	Prevent further leakage or spillage if safe to do so. Do not let product enter drains

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a	Appearance	Colorless to pale yellow viscous liquid
b	Odor	Strong fruity, peach-like
c	Odor Threshold	No data available
d	pH	No data available
e	Melting Point /Freezing Point	No data available
f	Boiling Point	297°C
g	Flash Point	>110°C closed cup
h	Evaporation Rate	No data available
i	Flammability (Solid, Gas)	No data available
j	Upper/lower Flammability Limit	No data available
k	Vapor pressure	No data available
l	Vapor density	No data available
m	Relative density at 25°C	0.938-0948
n	Solubility	1 mL is soluble in 5mL 60% alcohol, Soluble in alcohol, most fixed oils and propylene glycol, Insoluble in glycerol and water
o	Partition coefficient: n-octanol/water	No data available
p	Auto-ignition Temp.	No data available
q	Decomposition Temp,	No data available
r	Viscosity	No data available
s	Explosive properties	No data available
t	Oxidizing properties	No data available

9.2 Other Safety Information No data available

Section 10: STABILITY AND REACTIVITY

10.1	Reactivity	No data available
10.2	Chemical Stability	Stable under recommended storage conditions
10.3	Possibility of Hazardous reactions	Vapors may form explosive mixture with air
10.4	Conditions to avoid	No data available
10.5	Incompatible materials	Strong oxidizing agents, Strong Bases
10.6	Hazardous decomposition products	No data available
10.7	Further Information	No data available

Section 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute Toxicity

LD50-Oral-Rat

18,500 mg/kg

Remarks: Behavioral: Somnolence (general depressed activity)

Skin and Appendages: Other: Hair

LC50-Inhalation

No data available

LD50-Dermal

No data available

Skin corrosion/irritation

Rabbit

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

Germ Cell mutagenicity

No data available

Carcinogenicity

IARC

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

ACGIH

No component of this product, present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP

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

OSHA

No component of this product, present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

No data available

Teratogenicity

No data available

Specific target organ toxicity-single exposure (GHS)

Inhalation – May cause respiratory irritation

Specific target organ toxicity-repeated exposures (GHS)

No data available

Aspiration Hazards

No data available

Potential Health effects

Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated

Synergistic effect

No data available

RTECS:

YQ2485000

Section 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to Fish

LC50 Oncorhynchus mykiss (rainbow trout) – 569 mg/l -96 h

Toxicity to daphnia and other aquatic invertebrates

EC50- Daphnia magna (Water flea) 17.0 mg/l – 48 h

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required /

12.6 Other adverse effects

not conducted

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. **Harmful to aquatic life with long lasting effects.**

Section 13: DISPOSAL CONSIDERATIONS

13.1 Disposal methods

Product: According to local regulations
Packaging: According to local regulations

Section 14: TRANSPORT INFORMATION

DOT (US): Not dangerous goods
IMDG: Not dangerous goods
IATA: Not dangerous goods

Section 15: REGULATORY INFORMATION

Reach No. A registration number is not available for this substance as its uses are exempted from registration, the annual tonnage not require a registration or the registration is envisaged for a later registration deadline.

SARA 302 Components No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

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

SARA 311/312 Hazards Acute health hazard.

Massachusetts Right to Know components No components are subject to the Massachusetts Right to Know Act

Pennsylvania Right to Know components Undecan-4-olide CAS# 104-67-6 Rev. Date:

New Jersey Right to Know components Undecan-4-olide CAS# 104-67-6 Rev. Date:

California Prop. 65 components This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Section 16: OTHER INFORMATION

HMIS Rating

Health hazard 2
Chronic Health Hazard
Flammability 1
Physical Hazard 0

Further Information

Aurochemicals provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose. Aurochemicals makes no representations or warranties, either expressed or implied, including without limitation any warranties of merchantability, fitness for a particular purpose with respect to the information set forth herein or the product to which the information refers. Accordingly, Aurochemicals will not be responsible, nor held liable, for damages resulting from use of or reliance upon this information.

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