

HEALTH	0
FLAMMABILITY	2
REACTIVITY	0

Section 1: PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product Name	2-Undecanone (Methyl Nonyl Ketone), Natural
Product Number	0309311
CAS-No.	112-12-9

1.2 Product Recommended Use

Flavorings

1.3 Preparation Information

Company	Aurochemicals 7 Nicoll Street Washingtonville, NY 10992- USA
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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)	Flammable liquids (Category 4), H227 Acute aquatic toxicity (Category 1), H400 Chronic aquatic toxicity (Category 1) H410
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2.2 GHS Label Elements, Including precautionary statements

Pictogram



Signal Statement

WARNING

Hazard Statement(s)

H227	Combustible liquid
H410	Very toxic to aquatic life with long lasting effects

Precautionary Statement(s)

P210	Keep away from heat/sparks/open flames/hot surfaces – No smoking
P273	Avoid Release to the environment
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P370+P378	In case of fire: Use dry sand, dry chemical or alcohol resistant foam for extinction Collect spillage
P391	Store in a well ventilated place. Keep cool
P403+P235	Dispose of contents/container to an approved waste disposal plant

P501

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

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances

Chemical characterization	Natural Product
Synonyms	Methyl Nonyl Ketone
Formula	C ₁₁ H ₂₂ O
Molecular Weight	170.29 g/mol
CAS-No	112-12-9
EC-No.	203-937-5

Hazardous Components

Component	Classification	Concentration
Undecan 2-one	Flammable Liquid (4) H227 Acute Aquatic toxicity (Category 1), H400 Aquatic Chronic (1), H410	-

Section 4: FIRST AID MEASURES

4.1 Description of first aid measures

General Advice	Consult a 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. Consult a physician
Contact with eyes:	Rinse thoroughly with plenty of water for at least 15 minutes as a precaution. 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 Carbon oxides

substance or mixture

- 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. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.
- 6.2 Environment precautions** Prevent further leakage or spillage if safe to do so. Do not allow to enter drains or sewage system. Discharge into the environment must be avoided.
- 6.3 Methods and materials for containment and clean up** Pick up and arrange disposal without creating dust. 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. Keep away from sources of ignition-No smoking. Take measures to prevent the buildup of electrostatic charge.
- 7.2 Conditions for Safe storage** Keep container tightly closed in a dry and well-ventilated place. Containers which have been 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 with workplace control parameters Contains no substance with workplace control parameters
- 8.2 Exposure Controls**
Appropriate Engineering Controls Handle in accordance with good industrial hygiene and safety practices.
- 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 tightly fitting safety goggles. NIOSH tested and approved.

Skin protection	Wear chemically resistant gloves of Butyl rubber. 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	Complete suit protecting against chemicals, made of flame retardant antistatic material 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 multi-purpose combination (U) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full faced supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (U) or CEN (EU).
Control of environmental exposure	Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a	Appearance	Colorless to slightly yellow liquid
b	Odor	Sweet
c	Odor Threshold	No data available
d	pH	No data available
e	Melting Point /Freezing Point	Melting Point -11-13°C
f	Boiling Point	231-232°C
g	Flash Point	88°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	<1 hPa at 20°C
l	Vapor density	5.88 (Air=1.0)
m	Relative density @25°C	0.822-0.832
n	Solubility	Soluble in most organic solvents
o	Partition coefficient: n-octanol/water	Log Pow: 4.136 – the preceding data, or interpretation of data, was determined using QSAR (Quantitative Structure Activity Relationship) modeling.
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

Relative vapor density	5.88 – (Air=1.0)
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Section 10: STABILITY AND REACTIVITY

10.1 Reactivity	No data available
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Safety Data Sheet

10.2	Chemical Stability	Stable under recommended storage conditions
10.3	Possibility of Hazardous reactions	No data available
10.4	Conditions to avoid	Heat, Flames and Sparks
10.5	Incompatible materials	Bases, 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	No data available
LC50-Inhalation	No data available
LD50-Dermal-Rabbit	>5,000 mg/kg
Skin corrosion/irritation	No data available
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 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 Mouse: Intraperitoneal. Effects on Fertility: Female fertility index (e.g., # females pregnant per # sperm positive females; # females pregnant per # females mated.)

Teratogenicity No data available

Specific target organ toxicity-single exposure (GHS) No data available

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 effects No data available

RTECS: No data available

Section 12: ECOLOGICAL INFORMATION

12.1 Toxicity

	To daphnia and other aquatic invertebrates	EC50- Daphnia magna (Water Flea) 0.54 mg/l – 48h
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 / not conducted
12.6	Other adverse effects	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very Toxic to aquatic life with long lasting effects. Do not empty into drains.

Section 13: DISPOSAL CONSIDERATIONS

13.1	Disposal methods	
	Product:	According to local regulations
	Packaging	According to local regulations

Section 14: TRANSPORT INFORMATION

DOT (US)	UN-Number 3082 Class: 9 Packing Group III
Proper Shipping Name	Environmentally hazardous substance liquid, n.o.s. (Undecan-2-one)
Reportable Quantity (RQ)	No
Marine pollutant	No
Poison Inhalation Hazard	No
IMDG	UN-Number 3082 Class: 9 Packing Group III EMS-No. F-A, S-F
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE. LIQUID, N.O.S. (Undecan-2-one)
Marine Pollutant	No
IATA	UN-Number 3082 Class: 9 Packing Group III
Proper Shipping Name	Environmentally hazardous substance liquid, n.o.s. (Undecan-2-one)
Further Information	E-H-S Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous > 5L for liquids or >5kg for solids.

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,

Safety Data Sheet

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

Fire Hazard, 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-2-one CAS# 112-12-9 Rev. Date:

New Jersey Right to Know components

Undecan-2-one CAS# 112-12-9 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 0
Chronic Health Hazard
Flammability 2
Reactive 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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