

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

1.1. Product identifier

Name of product	Undecalactone gamma US Nat. Prod-Nr 82009
Name of substance	Undecan-4-olide
EC No	203-225-4
CAS No	104-67-6

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

No information available.

1.3. Details of the supplier of the safety data sheet

Manufacturer/distributor	A.C.S. International GmbH Im Wesertal 5, D-37671 Hxter - Stahle Phone +49 (0)5531 9906142, Fax +49 (0)5531 9906 196 E-Mail regulatory@acsint.com Internet www.acsint.com
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Advice	GIZ-Nord, Gttingen, Germany
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1.4. Emergency telephone number

Emergency advice	Phone +49 551 19240
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! SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Hazard classes and Hazard categories	Hazard Statements	Classification procedure
Eye Irrit. 2	H319	
Aquatic Chronic 3	H412	

! Hazard statements for health hazards

H319	Causes serious eye irritation.
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! Hazard statements for environmental hazards

H412	Harmful to aquatic life with long lasting effects.
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2.2. Label elements

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



GHS07

! Signal word

Warning

! Hazard statements for health hazards

H319 Causes serious eye irritation.

! Hazard statements for environmental hazards

H412 Harmful to aquatic life with long lasting effects.

Precautionary Statements

! Prevention

P264 Wash hands thoroughly after handling.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

! Response

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 If eye irritation persists: Get medical advice/attention.

! Disposal

P501 Dispose of contents/container to ...

2.3. Other hazards

No information available.

SECTION 3: Composition/ information on ingredients

3.1. Substances

CAS No 104-67-6
EC No 203-225-4

Undecan-4-olide

3.2. Mixtures

not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Remove contaminated soaked clothing immediately.

In case of inhalation

In case of inhalation remove the casualty into fresh air and seek medical advice.

In case of skin contact

In case of contact with skin wash off immediately with soap and water.
Remove contaminated clothing immediately, even underwear and shoes.
Seek medical advice immediately.

In case of eye contact

In case of contact with eyes rinse thoroughly with plenty of water and seek medical advice.

In case of ingestion

Turn a vomiting person lying on his back onto his side.
Do not induce vomiting.
Seek medical advice immediately.
Rinse out mouth and give plenty of water to drink.

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

No information available.

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

No information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Foam

Dry fire-extinguishing substance

Carbon dioxide

Unsuitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

Carbon monoxide (CO)

Carbon dioxide (CO₂)

5.3. Advice for firefighters

Special protective equipment for fire-fighters

Use breathing apparatus with independent air supply.

Do not inhale explosion and/or combustion gases.

Additional information

Cool endangered containers with water spray jet.

Collect contaminated firefighting water separately, must not be discharged into the drains.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Ensure adequate ventilation.

Remove persons to safety.

Use personal protective clothing.

Keep away sources of ignition.

6.2. Environmental precautions

Collect contaminated water / firefighting water separately.

Do not discharge into the drains/surface waters/groundwater.

6.3. Methods and material for containment and cleaning up

Take up with absorbent material (e.g. sand, sawdust, general-purpose binder).

After taking up the material dispose according to regulation.

6.4. Reference to other sections

No information available.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Care for thoroughly room ventilation, if necessary use in well ventilated area with local exhaust ventilation at workplace.

Take the usual precautions when handling with chemicals.

General protective measures

Avoid contact with eyes and skin

Do not inhale gases/vapours/aerosols.

Hygiene measures

At work do not eat, drink and smoke.

Remove soaked clothing immediately.

Wash hands before breaks and after work.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking

7.2. Conditions for safe storage, including any incompatibilities

Advice on storage compatibility

Do not store together with oxidizing agents.

Further information on storage conditions

Keep container tightly closed.

Protect from heat and direct solar radiation.

Store at cool and aired place.

7.3. Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Additional advice

not determined

8.2. Exposure controls

Respiratory protection

Environment-independent breathing apparatus.

Hand protection

chemical-resistant gloves

Eye protection

safety goggles with side protection

Other protection measures

protective overalls

Limitation and surveillance of the environment

not determined

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance
liquid

Colour
colorless to pale yellow

Odour
creamy, fatty, fruity, sweet, peach,
apricot

Odour threshold
not determined

Important health, safety and environmental information

	Value	Temperature	at	Method	Remark
pH value	not determined				
boiling point	297 °C		1,013 mbar		
melting point				not determined	
Flash point	> 100 °C			closed cup	
Vapourisation rate	not determined				
Flammable (solid)	not determined				
Flammability (gas)	not determined				
Ignition temperature	not determined				
Self ignition temperature	not determined				
Lower explosion limit	not determined				
Upper explosion limit	not determined				
Vapour pressure	not determined				
Relative density	0,942 - 0,945 g/cm ³	25 °C			
Vapour density	not determined				
Solubility in water	170 mg/l				
Solubility/other	not determined				
Partition coefficient n-octanol/water (log P O/W)	not determined				
Decomposition temperature	not determined				

	Value	Temperature	at	Method	Remark
Viscosity	not determined				

Oxidising properties

No information available.

Explosive properties

No information available.

9.2. Other information

No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

No information available.

10.2. Chemical stability

No information available.

10.3. Possibility of hazardous reactions

No information available.

10.4. Conditions to avoid

Evolution of heat.

10.5. Incompatible materials

Substances to avoid

Reactions with acids and strong oxidising agents.

10.6. Hazardous decomposition products

Carbon monoxide and carbon dioxide.

Thermal decomposition

Remark Stable at ambient temperature.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity/Irritation/Sensitization

	Value/Validation	Species	Method	Remark
LD50 acute oral	18500 mg/kg	rat		
LD50 acute dermal	> 2000 mg/kg	rat		
Skin irritation	non-irritant	rabbit		
Eye irritation	not determined	rabbit eye		

	Value/Validation	Species	Method	Remark
Skin sensitization	non-sensitizing	human		

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicological effects

	Value	Species	Method	Validation
Fish	LC50 569 mg/l (96 h)	Oncorhynchus mykiss		
Daphnia	EC50 17 mg/l (48 h)	Daphnia magna		

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

No information available.

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

No information available.

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Recommendations for the product

Remove in accordance with local official regulations.

Recommendations for packaging

Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse.

Packaging that cannot be cleaned should be disposed of like the product.

SECTION 14: Transport information

	ADR/RID	IMDG	IATA-DGR
14.1. UN number	-	-	-
14.2. UN proper shipping name	-	-	-

	ADR/RID	IMDG	IATA-DGR
14.3. Transport hazard class(es)	-	-	-
14.4. Packing group	-	-	-
14.5. Environmental hazards	-	-	-
14.6. Special precautions for user No information available.			
14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code No information available.			
Land and inland navigation transport ADR/RID Not classified.			
Transport/further information No dangerous goods as defined by the transport regulations - ADR/RID, IMDG, ICAO/IATA-DGR.			

SECTION 15: Regulatory information

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

National regulations

Water hazard class 1 value from literature

Decree for case of interference/remarks no

15.2. Chemical Safety Assessment

No information available.

SECTION 16: Other information

Training advice

no

Recommended uses and restrictions

National and local regulations concerning chemicals shall be observed.

Further information

The information contained herein is based on the state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.

Indication of changes: "!" = Data changed compared with the previous version. Previous version: 1.7

Sources of key data used

Listed in EINECS and TSCA