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

1.1. Product identifier

| | |
|--------------------------|--|
| Name of product | Nonalactone gamma US Nat. Prod-Nr 76066 |
| Name of substance | Nonan-4-olide |
| EC No | 203-219-1 |
| CAS No | 104-61-0 |

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 Hörter - Stahle Phone +49 (0)5531 9906142, Fax +49 (0)5531 9906 196 E-Mail regulatory@acsint.com Internet www.acsint.com |
|---------------------------------|---|

| | |
|---------------|------------------------------|
| Advice | GIZ-Nord, Göttingen, Germany |
|---------------|------------------------------|

1.4. Emergency telephone number

| | |
|-------------------------|---------------------|
| Emergency advice | Phone +49 551 19240 |
|-------------------------|---------------------|

! SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

No information available.

2.2. Label elements

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

No information available.

2.3. Other hazards

No information available.

SECTION 3: Composition/ information on ingredients

3.1. Substances

| | |
|------------------------|----------------------|
| CAS No 104-61-0 | Nonan-4-olide |
| EC No 203-219-1 | |

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

Do not induce vomiting.
Seek medical advice immediately.
Rinse out mouth thoroughly with water.

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.

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

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

Light protective clothing.

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

coconut, creamy

Odour threshold

not determined

Important health, safety and environmental information

| | Value | Temperature | at | Method | Remark |
|----------------------------------|----------------|-------------|----|----------------|--------|
| pH value | not determined | | | | |
| boiling point | 243 °C | | | | |
| melting point | | | | not determined | |
| Flash point | 93 °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 | | | | |

| | Value | Temperature | at | Method | Remark |
|--|------------------------------------|-------------|----|--------|-----------|
| Upper explosion limit | not determined | | | | |
| Vapour pressure | not determined | | | | |
| Relative density | 0,961 - 0,966 g/cm ³ | 25 °C | | | |
| Vapour density | not determined | | | | |
| Solubility in water | | | | | insoluble |
| Solubility/other | not determined | | | | |
| Partition coefficient n-octanol/water (log P O/W) | not determined | | | | |
| Decomposition temperature | not determined | | | | |
| 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 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 | 9780 mg/kg | rat | | |
| LD50 acute dermal | > 5000 mg/kg | rabbit | | |
| Skin irritation | non-irritant | human | | |
| Eye irritation | not determined | rabbit eye | | |
| Skin sensitization | non-sensitizing | human | | |

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicological effects

| | Value | Species | Method | Validation |
|----------------|---------------------|---------------|--------|------------|
| Daphnia | EC50 52 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 | - | - | - |
| 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: 1.8

Sources of key data used

Listed in EINECS and TSCA